7/16/2003

********** STN Columbus **********

FILE 'MEDLINE' ENTERED

FILE 'JAPIO' ENTERED
FILE 'BIOSIS'
FILE 'SCISEARCH'
FILE 'WPIDS'
FILE 'CAPLUS'
FILE 'EMBASE'
=> s interleukin-22 receptor# or interleukin 22 receptor# or il-9 inducible gene# or il-tif or il-10 related t cell derived inducible factor#
3 FILES SEARCHED...
5 FILES SEARCHED...
L1 76 INTERLEUKIN-22 RECEPTOR# OR INTERLEUKIN 22 RECEPTOR# OR IL-9
INDUCIBLE GENE# OR IL-TIF OR IL-10 RELATED T CELL DERIVED INDUCI
BLE FACTOR#

=> s interleukin-20 receptor beta or interleukin-20 receptor-beta or interleukin 20 receptor beta or interleukin-20 receptorbeta or il-20r-beta or il-20rbeta or il-20r beta
4 FILES SEARCHED...
L2 8 INTERLEUKIN-20 RECEPTOR BETA OR INTERLEUKIN-20 RECEPTOR-BETA OR
INTERLEUKIN 20 RECEPTOR BETA OR INTERLEUKIN-20 RECEPTORBETA OR
IL-20R-BETA OR IL-20RBETA OR IL-20R BETA

=> s interleukin-20 receptor#
L3 13 INTERLEUKIN-20 RECEPTOR#

=> s interleukin-20 receptor# or il-20r!
L4 34 INTERLEUKIN-20 RECEPTOR# OR IL-20R!

=> s l1 and l2
L5 1 L1 AND L2

=> s l1 and l2
L6 1 L1 AND L2

=> s l1 and l4
L7 7 L1 AND L4

=> s l1 and l3
L8 1 L1 AND L3

=> dup rem l7
PROCESSING COMPLETED FOR L7
L9 3 DUP REM L7 (4 DUPLICATES REMOVED)

=> dup rem l1
PROCESSING COMPLETED FOR L1
L10 28 DUP REM L1 (48 DUPLICATES REMOVED)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L11 4 DUP REM L2 (4 DUPLICATES REMOVED)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L12 14 DUP REM L4 (20 DUPLICATES REMOVED)

=> d his

(FILE 'HOME' ENTERED AT 13:39:32 ON 27 DEC 2002)

FILE 'MEDLINE, JAPIO, BIOSIS, SCISEARCH, WPIDS, CAPLUS, EMBASE' ENTERED
AT 13:39:41 ON 27 DEC 2002
L1 76 S INTERLEUKIN-22 RECEPTOR# OR INTERLEUKIN 22 RECEPTOR# OR IL-9
L2 8 S INTERLEUKIN-20 RECEPTOR BETA OR INTERLEUKIN-20 RECEPTOR-BETA
L3 13 S INTERLEUKIN-20 RECEPTOR#
L4 34 S INTERLEUKIN-20 RECEPTOR# OR IL-20R!
L5 1 S L1 AND L2
L6 1 S L1 AND L2
L7 7 S L1 AND L4
L8 1 S L1 AND L3
L9 3 DUP REM L7 (4 DUPLICATES REMOVED)
L10 28 DUP REM L1 (48 DUPLICATES REMOVED)
L11 4 DUP REM L2 (4 DUPLICATES REMOVED)
L12 14 DUP REM L4 (20 DUPLICATES REMOVED)

=> d l5 ibib abs

L5 ANSWER 1 OF 1 MEDLINE
ACCESSION NUMBER: 2001527384 MEDLINE
DOCUMENT NUMBER: 21448676 PubMed ID: 11564763
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L; Leemans C; Lejeune D; Kotenko S V; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Avenue Hippocrate 74, B-1200 Brussels, Belgium.
CONTRACT NUMBER: RO1 AI51139 (NIAID)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Oct 1) 167 (7) 3545-9. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204
AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20Ralpha and DIRS1/ ***IL*** - ***20Rbeta*** (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by IL-22R and DIRS1/IL20Rbeta (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

=> d l6 ibib abs

L6 ANSWER 1 OF 1 MEDLINE
ACCESSION NUMBER: 2001527384 MEDLINE
DOCUMENT NUMBER: 21448676 PubMed ID: 11564763
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L; Leemans C; Lejeune D; Kotenko S V; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Avenue Hippocrate 74, B-1200 Brussels, Belgium.
CONTRACT NUMBER: RO1 AI51139 (NIAID)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Oct 1) 167 (7) 3545-9. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204
AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20Ralpha and DIRS1/ ***IL*** - ***20Rbeta*** (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by IL-22R and DIRS1/IL20Rbeta (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

=> d l7 ibib abs 1-7

L7 ANSWER 1 OF 7 MEDLINE
ACCESSION NUMBER: 2002725014 IN-PROCESS
DOCUMENT NUMBER: 22375351 PubMed ID: 12486876
TITLE: The family of IL-10-related cytokines and their receptors: related, but to what extent?.
AUTHOR: Kotenko Sergei V
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, New Jersey Medical School, University of Medicine and Dentistry, 185 South Orange Avenue, MSB E-631, Newark, NJ 07103, USA.. kotenkse@umdnj.edu
CONTRACT NUMBER: RO1 AI51139-01 (NIAID)
SOURCE: CYTOKINE AND GROWTH FACTOR REVIEWS, (2002 Jun) 13 (3) 223-40.

Journal code: 9612306. ISSN: 1359-6101.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021219
Last Updated on STN: 20021219
AB Five novel cytokines (IL-19, IL-20, IL-22 (***IL*** - ***TIF***), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155)) demonstrating limited primary sequence identity and probable structural homology to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homology but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2-10), ***IL*** - ***20R1*** (CRF2-8) and ***IL*** - ***20R2*** (CRF2-11). Biological activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered.

L7 ANSWER 2 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:487454 BIOSIS
DOCUMENT NUMBER: PREV200200487454
TITLE: The family of IL-10-related cytokines and their receptors: Related, but to what extent.
AUTHOR(S): Kotenko, Sergei V. (1)
CORPORATE SOURCE: (1) Department of Biochemistry and Molecular Biology, New Jersey Medical School, University of Medicine and Dentistry, 185 South Orange Avenue, MSB E-631, Newark, NJ, 07103: kotenkse@umdnj.edu USA
SOURCE: Cytokine & Growth Factor Reviews, (June, 2002) Vol. 13, No. 3, pp. 223-240. print.
ISSN: 1359-6101.
DOCUMENT TYPE: General Review
LANGUAGE: English

L7 ANSWER 3 OF 7 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2002:629917 SCISEARCH
THE GENUINE ARTICLE: 576XW
TITLE: The family of IL-10-related cytokines and their receptors: related, but to what extent?
AUTHOR: Kotenko S V (Reprint)
CORPORATE SOURCE: Univ Med & Dent New Jersey, New Jersey Med Sch, Dept Biochem & Mol Biol, 185 S Orange Ave, MSB E-631, Newark, NJ 07103 USA (Reprint); Univ Med & Dent New Jersey, New Jersey Med Sch, Dept Biochem & Mol Biol, Newark, NJ 07103 USA
COUNTRY OF AUTHOR: USA
SOURCE: CYTOKINE & GROWTH FACTOR REVIEWS, (JUN 2002) Vol. 13, No. 3, pp. 223-240.
Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND.
ISSN: 1359-6101.
DOCUMENT TYPE: General Review; Journal
LANGUAGE: English
REFERENCE COUNT: 105
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Five novel cytokines (IL-19, IL-20, IL-22 (***IL*** - ***TIF***), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155)) demonstrating limited primary sequence identity and probable structural homology to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homology but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2-10), ***IL*** - ***20R1*** (CRF2-8) and ***IL*** - ***20R2*** (CRF2-11). Biological activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered. (C) 2002 Elsevier Science Ltd. All rights reserved.

L7 ANSWER 4 OF 7 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2002:461040 SCISEARCH
THE GENUINE ARTICLE: 555WA
TITLE: Cutting edge: Immune cells as sources and targets of the IL-10 family members?
AUTHOR: Wolk K; Kunz S; Asadullah K; Sabat R (Reprint)
CORPORATE SOURCE: Schering AG, Dept Expt Dermatol, Muellerstr 178, D-13342 Berlin, Germany (Reprint); Schering AG, Dept Expt Dermatol, D-13342 Berlin, Germany; Humboldt Univ, Med Sch Charite, Inst Med Immunol, Berlin, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: JOURNAL OF IMMUNOLOGY, (1 JUN 2002) Vol. 168, No. 11, pp. 5397-5402.
Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
ISSN: 0022-1767.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 15
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB This study investigated the expression of five novel human IL-10-related molecules and their receptors in blood mononuclear cells. IL-19 and IL-20 were found to be preferentially expressed in monocytes. IL-22 and IL-26 (AK155) expression was exclusively detected in T cells, especially upon type 1 polarization, and in NK cells. IL-24 (melanoma differentiation-associated gene 7) expression was restricted to monocytes and T cells. Detection of these molecules in lymphocytes was predominantly linked to cellular activation. Regarding T cells, IL-26 was primarily produced by memory cells, and its expression was independent on costimulation. In contrast to the high expression of receptors for IL-10 homologs in different tissues and cell lines, monocytes and NK, B, and T cells showed clear expression only of EL-10R1, IL-10R2, and ***IL*** - ***20R2*** . In these cells, EL-20R2 might be part of a still-unknown receptor complex. Therefore, immune cells may represent a major source but a minor target of the novel IL-10 family members.

L7 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:438650 CAPLUS
DOCUMENT NUMBER: 137:138850
TITLE: The family of IL-10-related cytokines and their receptors: related, but to what extent?
AUTHOR(S): Kotenko, Sergei V.
CORPORATE SOURCE: New Jersey Medical School, Department of Biochemistry and Molecular Biology, University of Medicine and Dentistry, Newark, NJ, 07103, USA
SOURCE: Cytokine & Growth Factor Reviews (2002), 13(3), 223-240
CODEN: CGFRFB; ISSN: 1359-6101
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Five novel cytokines (IL-19, IL-20, IL-22 (***IL*** - ***TIF***), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155)) demonstrating limited primary sequence identity and probable structural homol. to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homol. but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2-10), ***IL*** - ***20R1*** (CRF2-8) and ***IL*** - ***20R2*** (CRF2-11). Biol. activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered.
REFERENCE COUNT: 106 THERE ARE 106 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 7 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002309525 EMBASE
TITLE: Interleukin 24 (MDA-7/MOB-5) signals through two heterodimeric receptors, IL-22R1/ ***IL*** - ***20R2*** and ***IL*** - ***20R1*** / ***IL*** - ***20R2***
AUTHOR: Wang M.; Tan Z.; Zhang R.; Kotenko S.V.; Liang P.
CORPORATE SOURCE: P. Liang, Vanderbilt-Ingram Cancer Center, 658 MRB II, Nashville, TN 37232, United States.
peng.liang@mcmail.vanderbilt.edu
SOURCE: Journal of Biological Chemistry, (1 Mar 2002) 277/9 (7341-7347).
Refs: 29
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interleukin 24 (IL-24) encodes a secreted protein that exhibits significant homology to the interleukin 10 (IL-10) family of cytokines. Here we show that the human IL-24 is secreted by activated peripheral blood mononuclear cells and is the ligand for two heterodimeric receptors, IL-22R1/ ***IL*** - ***20R2*** and ***IL*** - ***20R1*** / ***IL*** - ***20R2*** . The latter is also the receptor for IL-20. COS

cells transfected with either IL-24 receptor heterodimers bind the ligand with similar saturation kinetics. IL-24 binding to either its endogenous receptors on human keratinocytes or to ectopically expressed receptors on baby hamster kidney cells leads to activation of the signal transducers and activators of transcription. Taken together, these results provide compelling evidence for IL-24 being the fourth member of IL-10 family of cytokines to which their specific receptors have been identified.

L7 ANSWER 7 OF 7 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002231398 EMBASE
TITLE: The family of IL-10-related cytokines and their receptors: Related, but to what extent?.
AUTHOR: Kotenko S.V.
CORPORATE SOURCE: S.V. Kotenko, Department of Biochemistry, New Jersey Medical School, University of Medicine and Dentistry, 185 South Orange Avenue, Newark, NJ 07103, United States. kotenkse@umdnj.edu
SOURCE: Cytokine and Growth Factor Reviews, (2002) 13/3 (223-240). Refs: 106
ISSN: 1359-6101 CODEN: CGFRFB
PUBLISHER IDENT.: S 1359-6101(02)00012-6
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Five novel cytokines (IL-19, IL-20, IL-22 (***IL*** - ***TIF***), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155)) demonstrating limited primary sequence identity and probable structural homology to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homology but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2- 10), ***IL*** - ***20R1*** (CRF2-8) and ***IL*** - ***20R2*** (CRF2-11). Biological activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered. .COPYRGT. 2002 Elsevier Science Ltd. All rights reserved.

=> d l8 ibib abs 1

L8 ANSWER 1 OF 1 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002309525 EMBASE
TITLE: Interleukin 24 (MDA-7/MOB-5) signals through two heterodimeric receptors, IL-22R1/IL-20R2 and IL-20R1/IL-20R2.
AUTHOR: Wang M.; Tan Z.; Zhang R.; Kotenko S.V.; Liang P.
CORPORATE SOURCE: P. Liang, Vanderbilt-Ingram Cancer Center, 658 MRB II, Nashville, TN 37232, United States. peng.liang@mcmail.vanderbilt.edu
SOURCE: Journal of Biological Chemistry, (1 Mar 2002) 277/9 (7341-7347). Refs: 29
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interleukin 24 (IL-24) encodes a secreted protein that exhibits significant homology to the interleukin 10 (IL-10) family of cytokines. Here we show that the human IL-24 is secreted by activated peripheral blood mononuclear cells and is the ligand for two heterodimeric receptors, IL-22R1/IL-20R2 and IL-20R1/IL-20R2. The latter is also the receptor for IL-20. COS cells transfected with either IL-24 receptor heterodimers bind the ligand with similar saturation kinetics. IL-24 binding to either its endogenous receptors on human keratinocytes or to ectopically expressed receptors on baby hamster kidney cells leads to activation of the signal transducers and activators of transcription. Taken together, these results provide compelling evidence for IL-24 being the fourth member of IL-10 family of cytokines to which their specific receptors have been identified.

=> d l9 ibib abs 1-3

L9 ANSWER 1 OF 3 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002309525 EMBASE
TITLE: Interleukin 24 (MDA-7/MOB-5) signals through two heterodimeric receptors, IL-22R1/ ***IL*** - ***20R2*** and ***IL*** - ***20R1*** / ***IL*** - ***20R2***
AUTHOR: Wang M.; Tan Z.; Zhang R.; Kotenko S.V.; Liang P.
CORPORATE SOURCE: P. Liang, Vanderbilt-Ingram Cancer Center, 658 MRB II, Nashville, TN 37232, United States. peng.liang@mcmail.vanderbilt.edu
SOURCE: Journal of Biological Chemistry, (1 Mar 2002) 277/9 (7341-7347). Refs: 29
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interleukin 24 (IL-24) encodes a secreted protein that exhibits significant homology to the interleukin 10 (IL-10) family of cytokines. Here we show that the human IL-24 is secreted by activated peripheral blood mononuclear cells and is the ligand for two heterodimeric receptors, IL-22R1/ ***IL*** - ***20R2*** and ***IL*** - ***20R1*** / ***IL*** - ***20R2*** . The latter is also the receptor for IL-20. COS cells transfected with either IL-24 receptor heterodimers bind the ligand with similar saturation kinetics. IL-24 binding to either its endogenous receptors on human keratinocytes or to ectopically expressed receptors on baby hamster kidney cells leads to activation of the signal transducers and activators of transcription. Taken together, these results provide compelling evidence for IL-24 being the fourth member of IL-10 family of cytokines to which their specific receptors have been identified.

L9 ANSWER 2 OF 3 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2002:461040 SCISEARCH
THE GENUINE ARTICLE: 555WA
TITLE: Cutting edge: Immune cells as sources and targets of the IL-10 family members?
AUTHOR: Wolk K; Kunz S; Asadullah K; Sabat R (Reprint)
CORPORATE SOURCE: Schering AG, Dept Expt Dermatol, Muellerstr 178, D-13342 Berlin, Germany (Reprint); Schering AG, Dept Expt Dermatol, D-13342 Berlin, Germany; Humboldt Univ, Med Sch Charite, Inst Med Immunol, Berlin, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: JOURNAL OF IMMUNOLOGY, (1 JUN 2002) Vol. 168, No. 11, pp. 5397-5402.
Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
ISSN: 0022-1767.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 15
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB This study investigated the expression of five novel human IL-10-related molecules and their receptors in blood mononuclear cells. IL-19 and IL-20 were found to be preferentially expressed in monocytes. IL-22 and IL-26 (AK155) expression was exclusively detected in T cells, especially upon type 1 polarization, and in NK cells. IL-24 (melanoma differentiation-associated gene 7) expression was restricted to monocytes and T cells. Detection of these molecules in lymphocytes was predominantly linked to cellular activation. Regarding T cells, IL-26 was primarily produced by memory cells, and its expression was independent on costimulation. In contrast to the high expression of receptors for IL-10 homologs in different tissues and cell lines, monocytes and NK, B, and T cells showed clear expression only of EL-10R1, IL-10R2, and ***IL*** - ***20R2*** . In these cells, EL-20R2 might be part of a still-unknown receptor complex. Therefore, immune cells may represent a major source but a minor target of the novel IL-10 family members.

L9 ANSWER 3 OF 3 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2002725014 IN-PROCESS
DOCUMENT NUMBER: 22375351 PubMed ID: 12486876
TITLE: The family of IL-10-related cytokines and their receptors: related, but to what extent?.
AUTHOR: Kotenko Sergei V
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, New Jersey Medical School, University of Medicine and Dentistry, 185 South Orange Avenue, MSB E-631, Newark, NJ 07103, USA.. kotenkse@umdnj.edu
CONTRACT NUMBER: RO1 AI51139-01 (NIAID)
SOURCE: CYTOKINE AND GROWTH FACTOR REVIEWS, (2002 Jun) 13 (3) 223-40.
Journal code: 9612306. ISSN: 1359-6101.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021219
Last Updated on STN: 20021219
AB Five novel cytokines (IL-19, IL-20, IL-22 (***IL*** - ***TIF***), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155))

demonstrating limited primary sequence identity and probable structural homology to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homology but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2-10), ***IL*** - ***20R1*** (CRF2-8) and ***IL*** - ***20R2*** (CRF2-11). Biological activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered.

=> d l10 ibib abs 1-28

L10 ANSWER 1 OF 28 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 1
ACCESSION NUMBER: 2002-698750 [75] WPIDS
DOC. NO. CPI: C2002-197943
TITLE: New Zcytor16 polypeptide useful for treating autoimmune or inflammatory diseases, e.g. inflammatory bowel disease, rheumatoid arthritis, asthma, atherosclerosis, cancer or diabetes, or in assessing therapeutic aspects of ***IL*** - ***TIF*** .
DERWENT CLASS: B04 D16
INVENTOR(S): CHEN, Z; KINDSVOGEL, W; PRESNELL, S R; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 98
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002070655	A2	20020912	(200275)*	EN	221

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002070655	A2	WO 2002-US6267	20020304

PRIORITY APPLN. INFO: US 2001-279232P 20010327; US 2001-273035P 20010302
AN 2002-698750 [75] WPIDS
AB WO 200270655 A UPAB: 20021120
NOVELTY - An isolated polypeptide comprising at least 15 contiguous amino acid residues of, or a sequence at least 90 % identical to, a reference amino acid sequence comprising a 230 residue amino acid sequence (S1), given in the specification from amino acid residue 24-230, 27-230, 27-126 or 131-230, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) an isolated nucleic acid molecule encoding the novel polypeptide and comprising a 690 base pair sequence, given in the specification or which remains hybridized following stringent wash conditions to a nucleic acid molecule comprising the sequence of nucleotides 8-697, 77-697 or 86-697 of a 2464 or 707 base pair sequence (S2), both given in the specification or its complements;
(2) an expression vector comprising the nucleic acid molecule or DNA construct, a transcription promoter, and a transcription terminator, where the promoter is operably linked with the nucleic acid molecule or DNA construct that is linked to the transcription terminator;
(3) a recombinant host cell comprising the expression vector, which is a bacterium, a yeast cell, a fungal cell, insect cell, mammalian or plant cell;
(4) producing mouse Zcytor16 protein;
(5) an antibody or an antibody fragment that binds with the novel polypeptide;
(6) an anti-idiotype antibody that specifically binds with the antibody of (5);
(7) a fusion protein comprising the novel polypeptide;
(8) a DNA construct encoding the fusion protein, comprising a first DNA segment encoding the novel polypeptide, and at least one other DNA segment encoding a soluble Class I or II cytokine receptor polypeptide, where the DNA segments are connected in frame and encode the fusion protein;
(9) a method of producing a fusion protein;
(10) an isolated heterodimeric or multimeric soluble receptor complex, comprising soluble receptor subunits, where at least one of the subunits has a soluble cytokine receptor polypeptide;
(11) a method of producing a soluble cytokine receptor polypeptide that forms a heterodimeric or multimeric complex;
(12) a method of producing an antibody to the soluble cytokine receptor complex;
(13) an antibody produced by method (12) which specifically binds to a homodimeric, heterodimeric or multimeric receptor complex comprising the above polypeptide;
(14) a method for inhibiting ***IL*** - ***TIF*** -induced proliferation or differentiation of hematopoietic cells and their progenitors;
(15) a method of reducing ***IL*** - ***TIF*** -induced or interleukin (IL)-9-induced inflammation;
(16) a method of suppressing an inflammatory response in a mammal with inflammation;
(17) methods for detecting cancer in a patient; and
(18) a transgenic mouse which over-expresses residues 1-230, 24-230 or 27-230 of (S1).
ACTIVITY - Cytostatic; Antirheumatic; Antiarthritic; Dermatological; Immunosuppressive; Antiinflammatory; Antiasthmatic; Antiarteriosclerotic; Nephrotropic; Antidiabetic.
No biological data is given.
MECHANISM OF ACTION - Gene therapy.
USE - The Zcytor16 polypeptide is useful in modulating the immune system by binding Zcytor16 ligand, and thus, preventing the binding of the ligand with endogenous Zcytor16 receptor. It is useful for studying human inflammation or immune function, or for treating autoimmune or inflammatory diseases such as inflammatory bowel disease, rheumatoid arthritis, asthma, systemic lupus erythematosus, myasthenia gravis or allergy, atherosclerosis, cancer, diabetes, glomerulonephritis or pancreatitis, or in assessing therapeutic aspects of ***IL*** - ***TIF*** , chemical therapeutics, anti- ***IL*** - ***TIF*** antibodies, anti-Zcytor16 antibodies or Zcytor16 soluble receptors. The nucleic acid molecule and the anti-mouse Zcytor16 antibody are useful as probes in detecting gene expression and gene structure, such as in the diagnosis and/or prevention of spontaneous abortions or in monitoring placental health and function.
Dwg.0/1

L10 ANSWER 2 OF 28 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 2
ACCESSION NUMBER: 2002-383190 [41] WPIDS
DOC. NO. NON-CPI: N2002-299960
DOC. NO. CPI: C2002-108033
TITLE: Polynucleotide and polypeptide of soluble protein which binds to interleukin-TIF/IL-22 useful for inhibiting effect of ***IL*** - ***TIF*** /IL-22 on a cell.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): DUMOUTIER, L; RENAULD, J
PATENT ASSIGNEE(S): (LUDW-N) LUDWIG INST CANCER RES
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002024912	A2	20020328	(200241)*	EN	42

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001092918 A 20020402 (200252)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002024912	A2	WO 2001-US29576	20010921
AU 2001092918	A	AU 2001-92918	20010921

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001092918	A Based on	WO 200224912

PRIORITY APPLN. INFO: US 2001-919162 20010731; US 2000-234583P 20000922; US 2000-245495P 20001103
AN 2002-383190 [41] WPIDS
AB WO 200224912 A UPAB: 20020701
NOVELTY - An isolated polynucleotide (I) which encodes a soluble protein which binds to interleukin (***IL***)- ***TIF*** /IL-22 (also referred to as IL-22BP), where the complementary sequence of (I) hybridizes under stringent conditions to a nucleotide sequence (S1) of

2271 or 2366 bp as given in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an expression vector (II) comprising (I) operably linked to a promoter;

(2) a recombinant cell line or cell strain transformed or transfected with (I) or (II);

(3) isolated, soluble binding protein (III) which binds to ***IL*** - ***TIF*** /IL-22, having molecular weight of 23-40 kDa, as determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE);

(4) preparation of (III);

(5) isolated antibody (Ab) which specifically binds to (III);

(6) an isolated oligonucleotide (IV) consisting of nucleotides from 17-100 contiguous nucleotides of (S1);

(7) hybridoma cell line which produces monoclonal Ab; and

(8) a method (M1) for determining presence of a soluble protein which binds to ***IL*** - ***TIF*** /IL-22, comprising contacting the sample with Ab and determining binding of the antibody to the soluble, binding protein as a determination of presence of the soluble, binding protein in the sample;

(9) a method (M2) for determining expression of nucleic acid molecules which encode a protein antagonist of ***IL*** - ***TIF*** /IL-22 binding protein in a sample, comprising contacting the sample with an oligonucleotide which hybridizes specifically, under stringent conditions to S1, where hybridization with the oligonucleotide is indicative of expression of the nucleic acid molecule;

(10) a method (M3)of obtaining antibody molecules specific for (III), comprising bringing a population or panel of antibody molecules of diverse binding specificity into contact with (III) or its antigenic fragment, selecting one or more antibody molecules that bind the protein and testing the antibody molecules for binding specificity for (III), where an antibody molecule specific for the soluble binding protein is obtained.

ACTIVITY - None given.

No biological data is given.

MECHANISM OF ACTION - Antagonize for ***IL*** - ***TIF*** /IL-22 (claimed).

No biological data is given.

USE - (III) is useful for inhibiting (antagonizing) effect of ***IL*** - ***TIF*** /IL-22 on a cell; and for determining whether ***IL*** - ***TIF*** /IL-22 is present in a sample; and for inhibiting binding of ***IL*** - ***TIF*** /IL-22 to a binding partner, preferably in vitro; and for obtaining an antibody molecules specific for (III) from a population or panel of antibody molecules of diverse binding specificity.

(III) is further useful in manufacture of a medicament for treating an IL-22 mediated disease; and for assaying an agent, preferably an antibody or a peptide fragment of ***IL*** - ***TIF*** /IL-22 or (III), that modulates binding of (III) to ***IL*** - ***TIF*** /IL-22, where the agent identified is used in the manufacture of medicament for treating ***IL*** - ***TIF*** /IL-22 mediated disorder. Ab is useful for determining presence of (III), where Ab is detectably labeled. (IV) is useful for determining expression of (I) in a sample (all claimed).

Dwg.0/0

L10 ANSWER 3 OF 28 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-217182 [27] WPIDS
DOC. NO. CPI: C2002-066484
TITLE: New soluble cytokine receptor which binds interleukin-T-cell inducible factor and antagonizes its activity in inflammatory and immune diseases such as cancer, diabetes, asthma, sepsis, psoriasis and autoimmune diseases.
DERWENT CLASS: B04 D16
INVENTOR(S): KINDSVOGEL, W R; TOPOUZIS, S
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002012345	A2	20020214	(200227)*	EN	117

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2001090524 A 20020218 (200244)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002012345	A2	WO 2001-US24838	20010808
AU 2001090524	A	AU 2001-90524	20010808

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001090524	A Based on	WO 200212345

PRIORITY APPLN. INFO: US 2000-250876P 20001201; US 2000-223827P 20000808

AN 2002-217182 [27] WPIDS

AB WO 200212345 A UPAB: 20020429

NOVELTY - An isolated soluble cytokine receptor polypeptide (I), designated zcytor11 comprising a sequence (S1) of 211 amino acids defined in the specification or a sequence 90% identical to (S1) and which binds interleukin-T-cell inducible factor (***IL*** - ***TIF***) or antagonizes ***IL*** - ***TIF*** activity, where (I) forms homodimeric, heterodimeric or multimeric receptor complex, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) that encodes (I), where the polypeptide encoded by the polynucleotide sequence binds or antagonizes ***IL*** - ***TIF*** having a sequence of 179 amino acids defined in the specification;

(2) an expression vector (III) comprising operably linked a transcription promoter, a first DNA segments encoding (I) and a transcription terminator; and a second transcription promoter, a second DNA segment encoding a soluble class I or class II cytokine receptor polypeptide, and a transcription terminator, where the first and second DNA segments are contained within a single expression vector or are contained within independent expression vectors;

(3) a culture cell (IV) comprising (III), and which expresses the polypeptides encoded by the DNA segments;

(4) a DNA construct (V) encoding a fusion protein comprising a first DNA segment encoding (I), and at least one other DNA segment encoding a soluble class I or class II cytokine receptor polypeptide, where the first and second other DNA segments are connected-in-frame and encode the fusion protein;

(5) an expression vector comprising a transcription promoter, (V) and a transcription terminator, where the promoter is operably linked to the DNA construct which is linked to the transcription terminator;

(6) a cultured cell (VI) comprising the above vector;

(7) an isolated heterodimeric or multimeric soluble receptor complex, comprising soluble receptor subunits comprising (I);

(8) producing (I); and

(9) an antibody produced by using (I) which specifically binds to a homodimeric, heterodimeric or multimeric receptor complex comprising a soluble cytokine receptor polypeptide.

ACTIVITY - Antidiabetic; Antiinflammatory; Cytostatic; Antithyroid; Immunosuppressive; Antibacterial; Antiasthmatic; Antipsoriatic; Neuroprotective; Dermatological; Antirheumatic; Antiarthritic; Antiallergic. No supporting data is given.

MECHANISM OF ACTION - Antagonist of ***IL*** - ***TIF*** .

USE - (I) is useful for reducing ***IL*** - ***TIF*** - or IL-9 induced inflammation, and inhibiting ***IL*** - ***TIF*** -induced proliferation of hematopoietic cells and their progenitors, especially lymphoid cells such as macrophages or T cells, by culturing bone marrow or peripheral blood cells with a composition comprising (I) to reduce proliferation of the hematopoietic cells in the bone marrow or peripheral blood cells as compared to bone marrow or peripheral blood cells cultured in the absence of soluble cytokine receptor. (I) is also useful for suppressing an immune response in a mammal exposed to an antigen or pathogen, by determining a level of an antigen- or pathogen-specific antibody, administering a composition comprising (I), determining a post administration level of antigen- or pathogen-specific antibody, and comparing the level of antibody before administration to the level of antibody after administration, where a lack of increase or a decrease in antibody level is indicative of suppressing an immune response. (I) is further useful for producing an antibody to soluble cytokine receptor polypeptide. (VI) is useful for producing a fusion protein (claimed). Soluble zcytor11 receptor or heterodimeric polypeptide is useful for enhancing the in vivo killing of target tissues by directly stimulating a zcytor11 receptor-modulated apoptotic pathway, resulting in cell death of hyperproliferative cells expressing zcytor11 receptor or a zcytor11 heterodimeric receptor, such as soluble zcytor11/CRF2-4 receptor. ***IL*** - ***TIF*** is involved in promoting Th1-type immune responses and antagonist of ***IL*** - ***TIF*** have beneficial use against diseases involving such immune responses. (I) is useful as cytokine antagonist and for detecting ligands that stimulate the proliferation and/or development of hematopoietic, lymphoid and myeloid cells in vitro and in vivo. Soluble zcytor11 heterodimers are useful as antagonists in inflammatory and immune diseases or conditions such as pancreatitis, type I diabetes (IDDM), pancreatic cancer, Graves disease, inflammatory bowel disease (IBD), Crohn's disease, colon and intestinal cancer, diverticulosis, autoimmune disease, sepsis, asthma, end-stage renal disease, psoriasis, organ or bone marrow transplant and kidney dysfunction. Soluble zcytor11 receptor or heterodimeric receptor polypeptides are useful in vivo or in diagnostic applications to detect

IL - ***TIF*** expressing cancers in vivo or in tissue samples and to prepare antibodies. Antibodies recognizing zcytoR11, soluble zcytoR11/CRF2-4 heterodimers, and multimers are useful to antagonize or agonize signaling by the ***IL*** - ***TIF*** receptors in the treatment of autoimmune disease such as IDDM, multiple sclerosis (MS), systemic lupus erythematosus (SLE), myasthenia gravis, rheumatoid arthritis and IBD. Anti-soluble zcytor11, anti-soluble zcytoR11/CRF2-4 heterodimer or multimer monoclonal antibody (MAb) is useful as an antagonist to deplete unwanted immune cells to treat autoimmune disease such asthma, allergy and other atopic disease. ZcytoR11 serves as a target for MAb therapy of cancer where an antagonizing MAb inhibits cancer growth and targets immune-mediated killing. Antibodies to soluble zcytor11 receptor or heterodimeric polypeptide are useful for tagging cells that express the corresponding receptors and assaying their expression levels, for affinity purification, within diagnostic assays for determining circulating levels of soluble receptor polypeptides, for detecting or quantitating soluble zcytor11 receptor or soluble zcytor11 heterodimeric polypeptide and as neutralizing antibodies or as antagonists to block zcytor11 receptor or zcytor11 heterodimeric polypeptide such as zcytor11/CRF2-4 or ***IL*** - ***TIF*** activity in vitro and in vivo.
Dwg.0/0

L10 ANSWER 4 OF 28 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-195964 [25] WPIDS
DOC. NO. NON-CPI: N2002-148828
DOC. NO. CPI: C2002-060635
TITLE: Stimulating expression of STAT transcription factor and inducing production of acute phase protein in a cell, involves contacting a cell capable of expressing STAT with T cell derived inducible factors.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): DUMOUTIER, L; RENAULD, J
PATENT ASSIGNEE(S): (LUDW-N) LUDWIG INST CANCER RES
COUNTRY COUNT: 24
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002010393	A2	20020207	(200225)*	EN	64

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: AU BR CA CN JP
AU 2001073033 A 20020213 (200238)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002010393	A2	WO 2001-US20485	20010627
AU 2001073033	A	AU 2001-73033	20010627

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001073033	A Based on	WO 200210393

PRIORITY APPLN. INFO: US 2000-626617 20000727
AN 2002-195964 [25] WPIDS
AB WO 200210393 A UPAB: 20020418
NOVELTY - Stimulating (M1) expression of a STAT transcription factor, or inducing production of an acute phase protein in a cell, involves contacting a cell capable of expressing STAT with an amount of ***IL*** - ***TIF*** /IL-21 (T cell derived inducible factors) to the cell sufficient to stimulate STAT expression or induce production of the acute phase protein.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a method (M2) of modulating activity of an ***IL*** - ***TIF*** (IL is interleukin and TIF is T cell derived inducible factors), also knwon as IL-21, comprising contacting a cell susceptible to ***IL*** - ***TIF*** /IL-21 activity with an ***IL*** - ***TIF*** /IL-21 modulator, in an amount sufficient to modulate ***IL*** - ***TIF*** /IL-21 activity;
(2) determining exposure to an inflammatory substance, by assaying a sample taken from a subjected believed to have been exposed to the inflammatory substance for expression of ***IL*** - ***TIF*** /IL-21, where expression of TIF is indicative of exposure to an inflammatory substance; and
(3) identifying a modulator of ***IL*** - ***TIF*** /IL-21, by contacting a substance believed to be a modulator of ***IL*** - ***TIF*** /IL-21 to a source of ***IL*** - ***TIF*** /IL-21 and a cell which expresses an acute phase protein and determining the acute phase protein produced by the cell, where a change in the production of acute phase protein relative to the production by the cell in the absence of the substance indicates the substance is ***IL*** - ***TIF*** /IL-21 modulator.
ACTIVITY - None given.
MECHANISM OF ACTION - Agonist or antagonist of IL-10R molecule (claimed).
To determine the effect of TIF on the activation of STAT-3 and induction of acute phase proteins, 5 x 106 hepG2 cells were stimulated for 2, 13 or 24 hours, with 1% supernatant from transiently infected HEK293-EBNA cells. Protein synthesis inhibitor cycloheximide was used at 10 mu g/ml, and combined with the cells and supernatants. Following stimulation, total RNA was isolated, and reverse transcription was performed using an oligo(dT) primer.
The cDNA corresponding to 20 ng of RNA was amplified with primers specific for human serum amyloid A: agctcagctacagcacagat, cctgccccatttattggcat; human alpha 1 antichymotrypsin: tgtcctctgccaccctaaca, taattcaccaggaccatcat; for human haptoglobin: gtggactcaggcaatgatgt, acatagagtgttaaagtggg; and for human beta -actin: gctggaaggtggacagcgag and tggcatcgtgatggactccg.
PCR products were analyzed, and the results indicated that TIF strongly induced SAA and alpha 1-chymotrypsin and to a lesser extent, haptoglobin.
USE - ***IL*** - ***TIF*** /IL-21 is useful for stimulating expression of STAT transcription factor and inducing the production of acute phase protein in a cell (claimed).
Dwg.0/0

L10 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:754535 CAPLUS
DOCUMENT NUMBER: 137:277811
TITLE: Human cytokine receptor Zcytor16, polynucleotides, chimeric proteins, and antibodies for diagnosis and therapy of inflammation and cancer
INVENTOR(S): Presnell, Scott R.; Xu, Wenfeng; Kindsvogel, Wayne; Chen, Zhi; Hughes, Steven D.
PATENT ASSIGNEE(S): Zymogenetics, Inc., USA
SOURCE: PCT Int. Appl., 268 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002077174	A2	20021003	WO 2002-US8811	20020322

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-279222P P 20010327
AB The present invention provides a new human cytokine receptor designated as "Zcytor16", its chimeric or heterodimeric or multimeric derivs., polynucleotides, and antibodies. These Zcytor16 cytokine receptor related mols. are useful in both basic research and as therapeutics for treating and diagnosing inflammation, immune disease, infection, anemia, hematopoietic and other cancers.

L10 ANSWER 6 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
3
ACCESSION NUMBER: 2002:582423 BIOSIS
DOCUMENT NUMBER: PREV200200582423
TITLE: Interleukin-22 (IL-22) activates the JAK/STAT, ERK, JNK, and p38 MAP kinase pathways in a rat hepatoma cell line. Pathways that are shared with and distinct from IL-10.
AUTHOR(S): Lejeune, Diane; Dumoutier, Laure; Constantinescu, Stefan; Kruijer, Wiebe; Schuringa, Jan Jacob; Renauld, Jean-Christophe (1)
CORPORATE SOURCE: (1) Ludwig Institute for Cancer Research, Ave. Hippocrate, 74, B-1200, Brussels: renauld@licr.ucl.ac.be Belgium
SOURCE: Journal of Biological Chemistry, (September 13, 2002) Vol. 277, No. 37, pp. 33676-33682. http://www.jbc.org/. print. ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
AB IL (interleukin)-22 is an IL-10-related cytokine; its main biological activity known thus far is the induction of acute phase reactants in liver and pancreas. IL-22 signals through a receptor that is composed of two chains from the class II cytokine receptor family: IL-22R (also called ZcytoR11/CRF2-9) and IL-10Rbeta (CRF2-4), which is also involved in IL-10 signaling. In this report, we analyzed the signal transduction pathways activated in response to IL-22 in a rat hepatoma cell line, H4IIE. We found that IL-22 induces activation of JAK1 and Tyk2 but not JAK2, as well as phosphorylation of STAT1, STAT3, and STAT5 on tyrosine residues, extending the similarities between IL-22 and IL-10. However our results unraveled some differences between IL-22 and IL-10 signaling. Using

antibodies specific for the phosphorylated form of MEK1/2, ERK1/2, p90RSK, JNK, and p38 kinase, we showed that IL-22 activates the three major MAPK pathways. IL-22 also induced serine phosphorylation of STAT3 on Ser727. This effect, which is not shared with IL-10, was only marginally affected by MEK1/2 inhibitors, indicating that other pathways might be involved. Finally, by overexpressing a STAT3 S727A mutant, we showed that serine phosphorylation is required to achieve maximum transactivation of a STAT responsive promoter upon IL-22 stimulation.

L10 ANSWER 7 OF 28 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2002376975 MEDLINE
DOCUMENT NUMBER: 22095539 PubMed ID: 11970958
TITLE: The conserved helix C region in the superfamily of interferon-gamma /interleukin-10-related cytokines corresponds to a high-affinity binding site for the HSP70 chaperone DnaK.
AUTHOR: Vandenbroeck Koen; Alloza Iraide; Brehmer Dirk; Billiau Alfons; Proost Paul; McFerran Neil; Rudiger Stefan; Walker Brian
CORPORATE SOURCE: Biomolecular Sciences Research Group, McClay Research Centre for Pharmaceutical Sciences, Queen's University of Belfast, United Kingdom.. k.vandenbroeck@qub.ac.uk
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Jul 12) 277 (28) 25668-76.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 20020719
Last Updated on STN: 20020813
Entered Medline: 20020812
AB HSP70 chaperones mediate protein folding by ATP-dependent interaction with short linear peptide segments that are exposed on unfolded proteins. The mode of action of the Escherichia coli homolog DnaK is representative of all HSP70 chaperones, including the endoplasmic reticulum variant BiP/GRP78. DnaK has been shown to be effective in assisting refolding of a wide variety of prokaryotic and eukaryotic proteins, including the alpha-helical homodimeric secretory cytokine interferon-gamma (IFN-gamma). We screened solid-phase peptide libraries from human and mouse IFN-gamma to identify DnaK-binding sites. Conserved DnaK-binding sites were identified in the N-terminal half of helix B and in the C-terminal half of helix C, both of which are located at the IFN-gamma dimer interface. Soluble peptides derived from helices B and C bound DnaK with high affinity in competition assays. No DnaK-binding sites were found in the loops connecting the alpha-helices. The helix C DnaK-binding site appears to be conserved in most members of the superfamily of interleukin (IL)-10-related cytokines that comprises, apart from IL-10 and IFN-gamma, a series of recently discovered small secretory proteins, including IL-19, IL-20, IL-22/ ***IL*** - ***TIF*** , IL-24/MDA-7 (melanoma differentiation-associated gene), IL-26/AK155, and a number of viral IL-10 homologs. These cytokines belong to a relatively small group of homodimeric proteins with highly interdigitated interfaces that exhibit the strongly hydrophobic character of the interior core of a single-chain folded domain. We propose that binding of DnaK to helix C in the superfamily of IL-10-related cytokines may constitute the hallmark of a novel conserved regulatory mechanism in which HSP70-like chaperones assist in the formation of a hydrophobic dimeric "folding" interface.

L10 ANSWER 8 OF 28 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002309525 EMBASE
TITLE: Interleukin 24 (MDA-7/MOB-5) signals through two heterodimeric receptors, IL-22R1/IL-20R2 and IL-20R1/IL-20R2.
AUTHOR: Wang M.; Tan Z.; Zhang R.; Kotenko S.V.; Liang P.
CORPORATE SOURCE: P. Liang, Vanderbilt-Ingram Cancer Center, 658 MRB II, Nashville, TN 37232, United States.
peng.liang@mcmail.vanderbilt.edu
SOURCE: Journal of Biological Chemistry, (1 Mar 2002) 277/9 (7341-7347).
Refs: 29
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interleukin 24 (IL-24) encodes a secreted protein that exhibits significant homology to the interleukin 10 (IL-10) family of cytokines. Here we show that the human IL-24 is secreted by activated peripheral blood mononuclear cells and is the ligand for two heterodimeric receptors, IL-22R1/IL-20R2 and IL-20R1/IL-20R2. The latter is also the receptor for IL-20. COS cells transfected with either IL-24 receptor heterodimers bind the ligand with similar saturation kinetics. IL-24 binding to either its endogenous receptors on human keratinocytes or to ectopically expressed receptors on baby hamster kidney cells leads to activation of the signal transducers and activators of transcription. Taken together, these results provide compelling evidence for IL-24 being the fourth member of IL-10 family of cytokines to which their specific receptors have been identified.

L10 ANSWER 9 OF 28 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2002:461040 SCISEARCH
THE GENUINE ARTICLE: 555WA
TITLE: Cutting edge: Immune cells as sources and targets of the IL-10 family members?
AUTHOR: Wolk K; Kunz S; Asadullah K; Sabat R (Reprint)
CORPORATE SOURCE: Schering AG, Dept Expt Dermatol, Muellerstr 178, D-13342 Berlin, Germany (Reprint); Schering AG, Dept Expt Dermatol, D-13342 Berlin, Germany; Humboldt Univ, Med Sch Charite, Inst Med Immunol, Berlin, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: JOURNAL OF IMMUNOLOGY, (1 JUN 2002) Vol. 168, No. 11, pp. 5397-5402.
Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
ISSN: 0022-1767.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 15
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB This study investigated the expression of five novel human IL-10-related molecules and their receptors in blood mononuclear cells. IL-19 and IL-20 were found to be preferentially expressed in monocytes. IL-22 and IL-26 (AK155) expression was exclusively detected in T cells, especially upon type 1 polarization, and in NK cells. IL-24 (melanoma differentiation-associated gene 7) expression was restricted to monocytes and T cells. Detection of these molecules in lymphocytes was predominantly linked to cellular activation. Regarding T cells, IL-26 was primarily produced by memory cells, and its expression was independent on costimulation. In contrast to the high expression of receptors for IL-10 homologs in different tissues and cell lines, monocytes and NK, B, and T cells showed clear expression only of EL-10R1, IL-10R2, and IL-20R2. In these cells, EL-20R2 might be part of a still-unknown receptor complex. Therefore, immune cells may represent a major source but a minor target of the novel IL-10 family members.

L10 ANSWER 10 OF 28 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2002422601 IN-PROCESS
DOCUMENT NUMBER: 22167373 PubMed ID: 12176383
TITLE: Crystal structure of recombinant human interleukin-22.
AUTHOR: Nagem Ronaldo Alves Pinto; Colau Didier; Dumoutier Laure; Renauld Jean-Christophe; Ogata Craig; Polikarpov Igor
CORPORATE SOURCE: Laboratorio Nacional de Luz Sincrotron, Sao Paulo, Brazil.
SOURCE: Structure (Camb), (2002 Aug) 10 (8) 1051-62.
Journal code: 101087697. ISSN: 0969-2126.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
OTHER SOURCE: PDB-1M4R
ENTRY DATE: Entered STN: 20020815
Last Updated on STN: 20021212
AB Interleukin-22 (***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** / ***IL*** - ***TIF*** /IL-22) is a novel cytokine belonging to the IL-10 family. Recombinant human IL-22 (hIL-22) was found to activate the signal transducers and activators of transcription factors 1 and 3 as well as acute phase reactants in several hepatoma cell lines, suggesting its involvement in the inflammatory response. The crystallographic structure of recombinant hIL-22 has been solved at 2.0 A resolution using the SIRAS method. Contrary to IL-10, the hIL-22 dimer does not present an interpenetration of the secondary-structure elements belonging to the two distinct polypeptide chains but results from interface interactions between monomers. Structural differences between these two cytokines, revealed by the crystallographic studies, clearly indicate that, while a homodimer of IL-10 is required for signaling, hIL-22 most probably interacts with its receptor as a monomer.

L10 ANSWER 11 OF 28 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 2002725014 IN-PROCESS
DOCUMENT NUMBER: 22375351 PubMed ID: 12486876
TITLE: The family of IL-10-related cytokines and their receptors: related, but to what extent?.
AUTHOR: Kotenko Sergei V
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, New Jersey Medical School, University of Medicine and Dentistry, 185 South Orange Avenue, MSB E-631, Newark, NJ 07103, USA.. kotenkse@umdnj.edu
CONTRACT NUMBER: RO1 AI51139-01 (NIAID)
SOURCE: CYTOKINE AND GROWTH FACTOR REVIEWS, (2002 Jun) 13 (3) 223-40.
Journal code: 9612306. ISSN: 1359-6101.

PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021219
Last Updated on STN: 20021219

AB Five novel cytokines (IL-19, IL-20, IL-22 (***IL*** - ***TIF***), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155)) demonstrating limited primary sequence identity and probable structural homology to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homology but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2-10), IL-20R1 (CRF2-8) and IL-20R2 (CRF2-11). Biological activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered.

L10 ANSWER 12 OF 28 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 2002195282 MEDLINE
DOCUMENT NUMBER: 21926044 PubMed ID: 11929132
TITLE: The interleukin-10 family of cytokines.
AUTHOR: Fickenscher Helmut; Hor Simon; Kupers Heide; Knappe Andrea; Wittmann Sabine; Sticht Heinrich
CORPORATE SOURCE: Hygiene-Institut, Abteilung Virologie, Ruprecht-Karls-Universitat Heidelberg, Germany.
SOURCE: Trends Immunol, (2002 Feb) 23 (2) 89-96.
Journal code: 100966032. ISSN: 1471-4906.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020404
Last Updated on STN: 20020528
Entered Medline: 20020523

AB A family of interleukin-10 (IL-10)-related cytokines has emerged, comprising a series of herpesviral and poxviral members and several cellular sequence paralogs, including IL-19, IL-20, IL-22 [***IL*** - ***10*** - ***related*** ***T*** - ***cell*** - ***derived*** ***inducible*** ***factor*** (***IL*** - ***TIF***)], IL-24 [melanoma differentiation-associated antigen 7 (MDA-7)] and IL-26 (AK155). Although the predicted helical structure of these homodimeric molecules is conserved, certain receptor-binding residues are variable and define the interaction with specific heterodimers of different type-2 cytokine receptors. This leads, through the activation of signal transducer and activator of transcription (STAT) factors, to diverse biological effects. For example, whereas IL-10 is a well-studied pleiotropic immunosuppressive and immunostimulatory cytokine, IL-22/ ***IL*** - ***TIF*** mediates acute-phase response signals in hepatocytes and IL-20 induces the hyperproliferation of keratinocytes, which has been proposed as a pathogenic mechanism of psoriasis.

L10 ANSWER 13 OF 28 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 2002219324 MEDLINE
DOCUMENT NUMBER: 21952673 PubMed ID: 11956016
TITLE: Viral and cellular interleukin-10 (IL-10)-related cytokines: from structures to functions.
AUTHOR: Dumoutier Laure; Renauld Jean-Christophe
CORPORATE SOURCE: Ludwig Institute for Cancer Research, UCL 74 59, Avenue Hippocrate, 74, B-1200 Brussels, Belgium.
SOURCE: EUROPEAN CYTOKINE NETWORK, (2002 Jan-Mar) 13 (1) 5-15.
Ref: 97
Journal code: 9100879. ISSN: 1148-5493.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 20020417
Last Updated on STN: 20020927
Entered Medline: 20020926

AB The anti-inflammatory and immunosuppressive activities of IL-10 have been extensively studied during the last 10 years. More recently a series of new cytokines, structurally related to IL-10, were described. This family includes mda-7, IL-19, IL-20, ***IL*** - ***TIF*** /IL-22, and AK155. Most of the biological functions of these cytokines remain to be unraveled but new data are coming out steadily. Although none of these "IL-10 homologs" mimics IL-10 activities, they are likely to be involved in inflammatory processes as well. mda-7, IL-19 and IL-20 form a subfamily within IL-10 homologs, based on conserved amino acid sequences, and on the use of shared receptor complexes. Functional studies have stressed the potential suppressing activity of mda-7 on tumor growth. As for IL-20, its overexpression in transgenic mice led to skin abnormalities, reminiscent of psoriatic lesions in humans. ***IL*** - ***TIF*** /IL-22 is a Th1 cytokine, and was shown to upregulate the acute phase reactant production by liver cells. Finally, for AK155, originally described as a gene induced upon T cell transformation by Herpes-virus saimiri, functional data are still lacking to determine its biological activities.

L10 ANSWER 14 OF 28 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 9
ACCESSION NUMBER: 2001-356158 [37] WPIDS
DOC. NO. CPI: C2001-110511
TITLE: New soluble cytokine receptor polypeptides and polynucleotides, useful for diagnosing and treating cancer and inflammatory conditions.
DERWENT CLASS: B04 D16
INVENTOR(S): CHEN, Z; KINDSVOGEL, W; PRESNELL, S R; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC; (CHEN-I) CHEN Z; (KIND-I) KINDSVOGEL W; (PRES-I) PRESNELL S R; (XUWW-I) XU W
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001040467	A1	20010607	(200137)*	EN	184

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001022533 A 20010612 (200154)
US 2002012669 A1 20020131 (200210)
EP 1234035 A1 20020828 (200264) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001040467	A1	WO 2000-US32703	20001201
AU 2001022533	A	AU 2001-22533	20001201
US 2002012669	A1 Provisional	US 1999-169049P	19991203
	Provisional	US 2000-232219P	20000913
	Provisional	US 2000-244610P	20001031
		US 2000-728911	20001201
EP 1234035	A1	EP 2000-986256	20001201
		WO 2000-US32703	20001201

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001022533	A Based on	WO 200140467
EP 1234035	A1 Based on	WO 200140467

PRIORITY APPLN. INFO: US 2000-244610P 20001031; US 1999-169049P 19991203; US 2000-232219P 20000913; US 2000-728911 20001201
AN 2001-356158 [37] WPIDS
AB WO 200140467 A UPAB: 20021031
NOVELTY - An isolated polypeptide (I) comprising at least 15 contiguous amino acid (aa) residues of aa residues 21-231, 21-210, 22-231, 22-210, 22-108, 112-210 or 21-110 of a fully defined aa sequence (S1) of 231 aa, is new.

DETAILED DESCRIPTION - An isolated polypeptide (I) comprising: at least 15 contiguous amino acid (aa) residues of aa residues 21-231, 21-210, 22-231, 22-210, 22-108, 112-210 or 21-110 of S1; or an aa sequence at least 70% identical to a reference aa sequence of aa residues 21-231, 21-210, 22-231, 22-210, 22-108, 112-210 or 21-110 of S1, is new.

INDEPENDENT CLAIMS are also included for the following:

(1) an isolated nucleic acid molecule (NAM) (II) comprising a fully defined nucleotide (NT) sequence (S2) of 693 base pairs (bp) or a NAM that remains hybridized following stringent wash conditions to a NAM consisting of NT 64-630 of a fully defined NT sequence (S3) of 2149 bp or its complement;

(2) a vector comprising (II);

(3) an expression vector (III) comprising (II), a transcription promoter and a transcription terminator, where the promoter is operably linked with (II) and (II) is operably linked with the transcription terminator;

(4) a recombinant host cell (IV), such as a bacterium, yeast cell, fungal cell, insect cell, mammalian cell and plant cell, comprising (III);

(5) producing a protein comprising culturing (IV);
(6) an antibody (Ab) or Ab fragment (V) that specifically binds to (I);
(7) an anti-idiotype Ab that specifically binds (V);
(8) a fusion protein (VI) comprising (I);
(9) an isolated polynucleotide (VII) that encodes a soluble cytokine receptor polypeptide comprising:
(a) an aa sequence at least 90% identical to aa residues 22-231 or 22-210 of S1, where the polypeptide binds ***IL*** - ***TIF*** (undefined) or antagonizes ***IL*** - ***TIF*** activity; or
(b) a polypeptide that forms a homodimeric, heterodimeric or multimeric receptor complex;
(10) an expression vector (VIII) comprising the following operably linked elements:
(a) a transcription promoter, a first DNA segment encoding aa residues 22-231 or 22-210 of S1 and a transcription terminator; and
(b) a second transcription promoter, a second DNA segment encoding a soluble class I or II cytokine receptor polypeptide and a transcription terminator;
(11) a cultured cell (IX) comprising (VIII) where:
(a) the cell expresses the polypeptides encoded by the DNA segments;
(b) the DNA segments are located on independent expression vectors, are co-transfected into the cell and the cell expresses the polypeptides encoded by the DNA segments; and
(c) the cell expresses a heterodimeric/multimeric soluble receptor polypeptide encoded by the DNA segments;
(12) a DNA construct (X) encoding a fusion protein comprising a DNA segment encoding aa residues 22-231 or 22-210 of S1, another DNA segment encoding a soluble class I or II cytokine receptor polypeptide, where the DNA segments are connected in-frame;
(13) an expression vector (XI) comprising a transcription promoter operably linked to (X) which is operably linked to a transcription terminator;
(14) a cultured cell (XII) comprising (XI);
(15) producing a fusion protein comprising culturing (XII) and isolating the protein produced;
(16) an isolated soluble cytokine receptor polypeptide (XIII) comprising an aa sequence at least 90% identical to a sequence of aa residues 22-231 or 22-210 of S1, where (XIII) binds ***IL*** - ***TIF*** (undefined) or antagonizes ***IL*** - ***TIF*** activity;
(17) an isolated heterodimeric/multimeric soluble receptor complex (XIV) comprising soluble receptor subunits, where one contains (XIII);
(18) producing a soluble cytokine receptor polypeptide that forms a heterodimeric/multimeric complex comprising culturing (IX) and isolating the polypeptides produced;
(19) producing (M1) an Ab to soluble cytokine receptor polypeptide;
(20) an Ab produced by M1 which specifically binds to (XIII); and
(21) an Ab which specifically binds to (XIV).
ACTIVITY - Antiinflammatory; cytostatic; antirheumatic; antiarthritic; antiasthmatic; antiatherosclerotic; immunosuppressive. No supporting data is given.
MECHANISM OF ACTION - IL-TIF antagonist.
USE - (XIII) is useful for:
(1) inhibiting IL-TIF induced proliferation or differentiation of hematopoietic cell(s) (progenitors);
(2) reducing IL-TIF induced or IL-9 induced inflammation; and
(3) suppressing an inflammatory response in a mammal with inflammation.
(V) is useful for detecting a cancer in a patient.
A polynucleotide comprising at least 14 contiguous nucleotides of S1 or its complement is useful for detecting a genetic abnormality and cancer in a patient (all claimed). Heteromeric/multimeric receptor polypeptides such as soluble zcytor 16/CRF2-4 can be used to reduce progression and symptoms of cancer. Zcytor16 polypeptides can also be used to detect IL-TIF levels which is indicative of pathological conditions including inflammatory states (e.g. rheumatoid arthritis) and cancer. Antibodies that bind zcytor16 polypeptides and the polypeptides themselves are useful for the treatment of inflammation, inflammatory diseases (e.g. infection, asthma, inflammatory bowel disease, rheumatoid arthritis and atherosclerosis) and autoimmune diseases.
Dwg.0/0

L10 ANSWER 15 OF 28 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 2001459174 MEDLINE
DOCUMENT NUMBER: 21396522 PubMed ID: 11481447
TITLE: A soluble class II cytokine receptor, IL-22RA2, is a naturally occurring IL-22 antagonist.
AUTHOR: Xu W; Presnell S R; Parrish-Novak J; Kindsvogel W; Jaspers S; Chen Z; Dillon S R; Gao Z; Gilbert T; Madden K; Schlutsmeyer S; Yao L; Whitmore T E; Chandrasekher Y; Grant F J; Maurer M; Jelinek L; Storey H; Brender T; Hammond A; Topouzis S; Clegg C H; Foster D C
CORPORATE SOURCE: ZymoGenetics Inc., Seattle, WA 98102, USA.
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (2001 Aug 14) 98 (17) 9511-6. Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AY044429
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010816
Last Updated on STN: 20010924
Entered Medline: 20010920
AB IL-22 is an IL-10 homologue that binds to and signals through the class II cytokine receptor heterodimer IL-22RA1/CRF2-4. IL-22 is produced by T cells and induces the production of acute-phase reactants in vitro and in vivo, suggesting its involvement in inflammation. Here we report the identification of a class II cytokine receptor designated IL-22RA2 (IL-22 receptor-alpha 2) that appears to be a naturally expressed soluble receptor. IL-22RA2 shares amino acid sequence homology with IL-22RA1 (also known as IL-22R, zcytor11, and CRF2-9) and is physically adjacent to IL-20Ralpha and IFN-gammaR1 on chromosome 6q23.3-24.2. We demonstrate that IL-22RA2 binds specifically to IL-22 and neutralizes IL-22-induced proliferation of BaF3 cells expressing IL-22 receptor subunits. IL-22RA2 mRNA is highly expressed in placenta and spleen by Northern blotting. PCR analysis using RNA from various tissues and cell lines showed that IL-22RA2 was expressed in a range of tissues, including those in the digestive, female reproductive, and immune systems. In situ hybridization revealed the dominant cell types expressing IL-22RA2 were mononuclear cells and epithelium. Because IL-22 induces the expression of acute phase reactants, IL-22RA2 may play an important role as an IL-22 antagonist in the regulation of inflammatory responses.

L10 ANSWER 16 OF 28 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 2001333524 MEDLINE
DOCUMENT NUMBER: 21286453 PubMed ID: 11390454
TITLE: Identification, cloning, and characterization of a novel soluble receptor that binds IL-22 and neutralizes its activity.
AUTHOR: Kotenko S V; Izotova L S; Mirochnitchenko O V; Esterova E; Dickensheets H; Donnelly R P; Pestka S
CORPORATE SOURCE: Department of Molecular Genetics and Microbiology, University of Medicine and Dentistry, Robert Wood Johnson Medical School, Piscataway, NJ 08854, USA.. kotenkse@umdnj.edu
CONTRACT NUMBER: 1P30-CA72720 (NCI)
RO1 AI36450 (NIAID)
RO1 AI43369 (NIAID)
RO1-CA46465 (NCI)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Jun 15) 166 (12) 7096-103. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20010827
Last Updated on STN: 20010827
Entered Medline: 20010823
AB With the use of a partial sequence of the human genome, we identified a gene encoding a novel soluble receptor belonging to the class II cytokine receptor family. This gene is positioned on chromosome 6 in the vicinity of the IFNGR1 gene in a head-to-tail orientation. The gene consists of six exons and encodes a 231-aa protein with a 21-aa leader sequence. The secreted mature protein demonstrates 34% amino acid identity to the extracellular domain of the IL-22R1 chain. Cross-linking experiments demonstrate that the protein binds IL-22 and prevents binding of IL-22 to the functional cell surface IL-22R complex, which consists of two subunits, the IL-22R1 and the IL-10R2c chains. Moreover, this soluble receptor, designated IL-22-binding protein (BP), is capable of neutralizing IL-22 activity. In the presence of the IL-22BP, IL-22 is unable to induce Stat activation in IL-22-responsive human lung carcinoma A549 cells. IL-22BP also blocked induction of the suppressors of cytokine signaling-3 (SOCS-3) gene expression by IL-22 in HepG2 cells. To further evaluate IL-22BP action, we used hamster cells expressing a modified IL-22R complex consisting of the intact IL-10R2c and the chimeric IL-22R1/gammaR1 receptor in which the IL-22R1 intracellular domain was replaced with the IFN-gammaR1 intracellular domain. In these cells, IL-22 activates biological activities specific for IFN-gamma, such as up-regulation of MHC class I Ag expression. The addition of IL-22BP neutralizes the ability of IL-22 to induce Stat activation and MHC class I Ag expression in these cells. Thus, the soluble receptor designated IL-22BP inhibits IL-22 activity by binding IL-22 and blocking its interaction with the cell surface IL-22R complex.

L10 ANSWER 17 OF 28 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 2001320061 MEDLINE
DOCUMENT NUMBER: 21286452 PubMed ID: 11390453
TITLE: Cloning and characterization of IL-22 binding protein, a natural antagonist of ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** /IL-22.

AUTHOR: Dumoutier L; Lejeune D; Colau D; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch and the Experimental Medicine Unit, Christian de Duve Institute of Cellular Pathology, Universite de Louvain, Brussels, Belgium.
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Jun 15) 166 (12) 7090-5. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
OTHER SOURCE: GENBANK-AJ297262
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20010827
Last Updated on STN: 20010827
Entered Medline: 20010823

AB The class II cytokine receptor family includes the receptors for IFN-alphabeta, IFN-gamma, IL-10, and ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** /IL-22. By screening genomic DNA databases, we identified a gene encoding a protein of 231 aa, showing 33 and 34% amino acid identity with the extracellular domains of the IL-22 receptor and of the IL-20R/cytokine receptor family 2-8, respectively, but lacking the transmembrane and cytoplasmic domains. A lower but significant sequence identity was found with other members of this family such as the IL-10R (29%), cytokine receptor family 2-4/IL-10Rbeta (30%), tissue factor (26%), and the four IFN receptor chains (23-25%). This gene is located on chromosome 6q24, at 35 kb from the IFNGR1 gene, and is expressed in various tissues with maximal expression in breast, lungs, and colon. The recombinant protein was found to bind ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** /IL-22, and to inhibit the activity of this cytokine on hepatocytes and intestinal epithelial cells. We propose to name this natural cytokine antagonist IL-22BP for IL-22 binding protein.

L10 ANSWER 18 OF 28 MEDLINE
ACCESSION NUMBER: 2001527384 MEDLINE
DOCUMENT NUMBER: 21448676 PubMed ID: 11564763
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L; Leemans C; Lejeune D; Kotenko S V; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Avenue Hippocrate 74, B-1200 Brussels, Belgium.
CONTRACT NUMBER: RO1 AI51139 (NIAID)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Oct 1) 167 (7) 3545-9. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204

AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20Ralpha and DIRS1/IL-20Rbeta (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by IL-22R and DIRS1/IL20Rbeta (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

L10 ANSWER 19 OF 28 MEDLINE DUPLICATE 13
ACCESSION NUMBER: 2001286615 MEDLINE
DOCUMENT NUMBER: 21264727 PubMed ID: 11035029
TITLE: Identification of the functional interleukin-22 (IL-22) receptor complex: the IL-10R2 chain (IL-10Rbeta) is a common chain of both the IL-10 and IL-22 (***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** , ***IL*** - ***TIF***) receptor complexes.
AUTHOR: Kotenko S V; Izotova L S; Mirochnitchenko O V; Esterova E; Dickensheets H; Donnelly R P; Pestka S
CORPORATE SOURCE: Department of Molecular Genetics and Microbiology, Robert Wood Johnson Medical School, Piscataway, New Jersey 08854-5635, USA.. kotenkse@umdnj.edu
CONTRACT NUMBER: 1P30-CA72720 (NCI)
RO1-AI36450 (NIAID)
RO1-AI43369 (NIAID)
RO1-CA46465 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Jan 26) 276 (4) 2725-32. Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010625
Last Updated on STN: 20010625
Entered Medline: 20010621

AB Interleukin-10 (***IL*** - ***10***)- ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** (***IL*** - ***TIF*** ; provisionally designated IL-22) is a cytokine with limited homology to IL-10. We report here the identification of a functional ***IL*** - ***TIF*** receptor complex that consists of two receptor chains, the orphan CRF2-9 and IL-10R2, the second chain of the IL-10 receptor complex. Expression of the CRF2-9 chain in monkey COS cells renders them sensitive to ***IL*** - ***TIF*** . However, in hamster cells both chains, CRF2-9 and IL-10R2, must be expressed to assemble the functional ***IL*** - ***TIF*** receptor complex. The CRF2-9 chain (or the ***IL*** - ***TIF*** -R1 chain) is responsible for Stat recruitment. Substitution of the CRF2-9 intracellular domain with the IFN-gammaR1 intracellular domain changes the pattern of ***IL*** - ***TIF*** -induced Stat activation. The CRF2-9 gene is expressed in normal liver and kidney, suggesting a possible role for ***IL*** - ***TIF*** in regulating gene expression in these tissues. Each chain, CRF2-9 and IL-10R2, is capable of binding ***IL*** - ***TIF*** independently and can be cross-linked to the radiolabeled ***IL*** - ***TIF*** . However, binding of ***IL*** - ***TIF*** to the receptor complex is greater than binding to either receptor chain alone. Sharing of the common IL-10R2 chain between the IL-10 and ***IL*** - ***TIF*** receptor complexes is the first such case for receptor complexes with chains belonging to the class II cytokine receptor family, establishing a novel paradigm for IL-10-related ligands similar to the shared use of the gamma common chain (gamma(c)) by several cytokines, including IL-2, IL-4, IL-7, IL-9, and IL-15.

L10 ANSWER 20 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 14
ACCESSION NUMBER: 2001:264637 BIOSIS
DOCUMENT NUMBER: PREV200100264637
TITLE: Human IL-22 (***IL*** - ***TIF***) is a novel homolog of IL-10 that phosphorylates STAT 3 in colon carcinoma cells expressing the IL-22R1 chain.
AUTHOR(S): Nagalakshmi, Marehalli L. (1); Parham, Christi (1); Rascle, Ann (1); Menon, Satish (1); Moore, Kevin (1); de Weal Malefyt, Rene (1)
CORPORATE SOURCE: (1) DNAX Research Institute, 901 California Ave, Palo Alto, CA, 94304 USA
SOURCE: FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A1052. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

AB DNA database mining and bioinformatics have revealed the existence of several novel proteins that have 'IL-10 like' structural motifs. Human IL-22 is one such protein has been described as a hepatocyte stimulatory factor inducing the production of acute phase proteins from hepatocytes. IL-22 binds to its specific receptor comprising the IL-22 R1 and the IL-10R2 (CRF2-4) chains. This interaction leads to the activation of signal transducer and activator of transcription factors (STATs-1 and -3). Quantitative PCR analysis (TaqMan) showed that human IL-22 mRNA is expressed in activated T cell cDNA libraries. The IL-22R1 chain mRNA is highly upregulated in normal and diseased colon cell libraries. Expression of this receptor chain was at very low levels in resting and activated monocyte, T, B and dendritic cell cDNA libraries. The second receptor component, the IL-10R2 chain is known to be expressed ubiquitously. In addition, we have shown that human IL-22 obtained from transient transfections activates STAT-3 in a colon carcinoma cell line, Colo205. Unstimulated cells expressed levels of IL-22R1 chain mRNA comparable to the human hepatoma cell line, HepG2. Levels of mRNA of the acute phase proteins - serum amyloid A, alpha - Antichymotrypsin and Haptoglobin were upregulated in IL-22 treated Colo205 cells. Future studies will be directed to identify the biological activities of this protein.

L10 ANSWER 21 OF 28 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 2002072629 MEDLINE
DOCUMENT NUMBER: 21657344 PubMed ID: 11798462
TITLE: Acinar cells of the pancreas are a target of interleukin-22.
AUTHOR: Aggarwal S; Xie M H; Maruoka M; Foster J; Gurney A L
CORPORATE SOURCE: The Department of Molecular Biology, Genentech, Inc., South

San Francisco, CA 94080, USA.
SOURCE: JOURNAL OF INTERFERON AND CYTOKINE RESEARCH, (2001 Dec) 21
(12) 1047-53.
Journal code: 9507088. ISSN: 1079-9907.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200203
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20020403
Entered Medline: 20020328
AB Interleukin-22 (IL-22) (also reported as ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** , ***IL*** - ***TIF***) is a recently identified cytokine found to signal through a receptor comprising the class II cytokine receptor family members IL-10Rbeta/CRF2-4 and IL-22R. Previous work has established that IL-10Rbeta, also a component of the IL10R complex, exhibits a broad distribution of mRNA expression. Here, we observe that IL-22R exhibits a restricted expression pattern, with highest levels of mRNA expression in pancreas and detectable expression in multiple other tissues, particularly liver, small intestine, colon, and kidney. We find that isolated primary pancreatic acinar cells and the acinar cell line 266-6 respond to IL-22 with activation of Stat3 and changes in gene transcription. IL-22 mediates robust induction of mRNA for pancreatitis-associated protein (PAP1)/Reg2 and osteopontin (OPN). PAP1 is a secreted protein related to the Reg family of trophic factors and was initially characterized as a protein elevated in pancreatitis. In vivo injection of IL-22 resulted in rapid induction of PAP1 in pancreas, a response not observed in mice deficient in IL-10Rbeta. These results support the conclusion that IL-10Rbeta is a required common component of both the IL-10 and IL-22 receptors and suggest that IL-22 may play a role in the immune response in pancreas.

L10 ANSWER 22 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:418733 BIOSIS
DOCUMENT NUMBER: PREV200200418733
TITLE: Novel cytokine IL-22 administrated by adenovirus vector or as recombinant purified protein induces acute-phase responses and renal tubular basophilia in female C57BL/6 mice.
AUTHOR(S): Lambert, A. (1); Goad, B.; Pittman, D.; Clark, E.; Block, L.; Wong, T.; Erickson, J.; Hayes, L.; Sheilds, K.; Deng, B.; Spaulding, V.; Annis, B.; Zollner, R.; Wang, I.; Kobayashi, M.; Thibodeaux, D.; Leonard, J.; Jacobs, K.; Fouser, L.
CORPORATE SOURCE: (1) Andover USA
SOURCE: Toxicologic Pathology, (November December, 2001) Vol. 29, No. 6, pp. 712. print.
Meeting Info.: Sixteenth Aspen Cancer Conference on Mechanisms of Toxicity, Carcinogenesis, Cancer Prevention, and Cancer Therapy Aspen, Colorado, USA July 15-18, 2001
ISSN: 0192-6233.
DOCUMENT TYPE: Conference
LANGUAGE: English

L10 ANSWER 23 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:418140 BIOSIS
DOCUMENT NUMBER: PREV200200418140
TITLE: Identification, cloning and characterization of a novel soluble receptor which binds IL-22 and neutralizes its activity.
AUTHOR(S): Kotenko, S. V. (1); Izotova, L. S.; Mirochnitchenko, O. V.; Dickensheets, H.; Donnelly, R. P.; Pestka, S.
CORPORATE SOURCE: (1) Dept. Biochemistry and Mol. Biology, UMDNJ-NJ Medical
School, Newark, NJ USA
SOURCE: Journal of Leukocyte Biology Supplement, (2001) No. 2001, pp. 26. print.
Meeting Info.: Joint Meeting of the Society for Leukocyte Biology and the International Cytokine Society: The Cytokine Odyssey 2001 Maui, HI, USA November 08-11, 2001 Society for Leukocyte Biology
DOCUMENT TYPE: Conference
LANGUAGE: English

L10 ANSWER 24 OF 28 MEDLINE DUPLICATE 16
ACCESSION NUMBER: 2001023984 MEDLINE
DOCUMENT NUMBER: 20469498 PubMed ID: 10875937
TITLE: Interleukin (IL)-22, a novel human cytokine that signals through the interferon receptor-related proteins CRF2-4 and IL-22R.
AUTHOR: Xie M H; Aggarwal S; Ho W H; Foster J; Zhang Z; Stinson J; Wood W I; Goddard A D; Gurney A L
CORPORATE SOURCE: Department of Molecular Biology, Genentech, Inc., South San Francisco, California 94080, USA.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Oct 6) 275 (40) 31335-9.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF279437; GENBANK-AF286095
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001113
AB We report the identification of a novel human cytokine, distantly related to interleukin (IL)-10, which we term IL-22. IL-22 is produced by activated T cells. IL-22 is a ligand for CRF2-4, a member of the class II cytokine receptor family. No high affinity ligand has yet been reported for this receptor, although it has been reported to serve as a second component in IL-10 signaling. A new member of the interferon receptor family, which we term IL-22R, functions as a second component together with CRF2-4 to enable IL-22 signaling. IL-22 does not bind the IL-10R. Cell lines were identified that respond to IL-22 by activation of STATs 1, 3, and 5, but were unresponsive to IL-10. In contrast to IL-10, IL-22 does not inhibit the production of proinflammatory cytokines by monocytes in response to LPS nor does it impact IL-10 function on monocytes, but it has modest inhibitory effects on IL-4 production from Th2 T cells.

L10 ANSWER 25 OF 28 MEDLINE DUPLICATE 17
ACCESSION NUMBER: 2000474382 MEDLINE
DOCUMENT NUMBER: 20420346 PubMed ID: 10954742
TITLE: Human interleukin-10-related T cell-derived inducible factor: molecular cloning and functional characterization as an hepatocyte-stimulating factor.
AUTHOR: Dumoutier L; Van Roost E; Colau D; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch and the Experimental Medicine Unit, Christian de Duve Institute of Cellular Pathology, Universite Catholique de Louvain, Avenue Hippocrate 74, B1200-Brussels, Belgium.
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE
UNITED STATES OF AMERICA, (2000 Aug 29) 97 (18) 10144-9.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AJ277247
ENTRY MONTH: 200010
ENTRY DATE: Entered STN: 20001012
Last Updated on STN: 20001012
Entered Medline: 20001005
AB ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** (***IL*** - ***TIF*** or IL-21) is a new cytokine structurally related to IL-10 and originally identified in the mouse as a gene induced by IL-9 in T cells and mast cells. Here, we report the cloning of the human ***IL*** - ***TIF*** cDNA, which shares 79% amino acid identity with mouse ***IL*** - ***TIF*** and 25% identity with human IL-10. Recombinant human ***IL*** - ***TIF*** was found to activate signal transducer and activator of transcription factors-1 and -3 in several hepatoma cell lines. ***IL*** - ***TIF*** stimulation of HepG2 human hepatoma cells up-regulated the production of acute phase reactants such as serum amyloid A, alpha1-antichymotrypsin, and haptoglobin. Although IL-10 and ***IL*** - ***TIF*** have distinct activities, antibodies directed against the beta chain of the IL-10 receptor blocked the induction of acute phase reactants by ***IL*** - ***TIF*** , indicating that this chain is a common component of the IL-10 and ***IL*** - ***TIF*** receptors. Similar acute phase reactant induction was observed in mouse liver upon ***IL*** - ***TIF*** injection, and ***IL*** - ***TIF*** expression was found to be rapidly increased after lipopolysaccharide (LPS) injection, suggesting that this cytokine contributes to the inflammatory response in vivo.

L10 ANSWER 26 OF 28 MEDLINE DUPLICATE 18
ACCESSION NUMBER: 2000126044 MEDLINE
DOCUMENT NUMBER: 20126044 PubMed ID: 10657629
TITLE: Cloning and characterization of ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** (***IL*** - ***TIF***), a novel cytokine structurally related to IL-10 and inducible by IL-9.
AUTHOR: Dumoutier L; Louahed J; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels, Belgium.
SOURCE: JOURNAL OF IMMUNOLOGY, (2000 Feb 15) 164 (4) 1814-9.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
OTHER SOURCE: GENBANK-AJ249491; GENBANK-AJ249492
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000320
Last Updated on STN: 20000320
Entered Medline: 20000309

AB IL-9 is a Th2 cytokine active on various cell types such as T and B lymphocytes, mast cells, and eosinophils, and potentially involved in allergy and asthma. To understand better the molecular mechanisms underlying the activity of this cytokine, we used a cDNA subtraction method to identify genes specifically induced by IL-9 in mouse T cells. One of the IL-9-regulated genes isolated by this approach turned out to encode a 180-amino acid long protein, including a potential signal peptide, and showing 22% amino acid identity with IL-10. This protein, designated ***IL*** - ***10*** - ***related*** ***T*** ***cell*** - ***derived*** ***inducible*** ***factor*** (***IL*** - ***TIF***), is induced by IL-9 in thymic lymphomas, T cells, and mast cells, and by lectins in freshly isolated splenocytes. Experiments concerning the mechanism regulating ***IL*** - ***TIF*** expression in T cells indicate that IL-9 induction is rapid (within 1 h), does not require protein synthesis, and depends on the activation of the Janus kinase (JAK)-STAT pathway. In vivo, constitutive expression of ***IL*** - ***TIF*** was detected by RT-PCR in thymus and brain, suggesting that the role of this new factor is not restricted to the immune system. Transfection of HEK293 cells with the ***IL*** - ***TIF*** cDNA resulted in the production of a glycosylated protein of about 25 kDa that was found to induce STAT activation in mesangial and neuronal cell lines. Further studies will have to address the possibility that some of the IL-9 activities may be mediated by ***IL*** - ***TIF*** .

L10 ANSWER 27 OF 28 MEDLINE DUPLICATE 19
ACCESSION NUMBER: 2001223439 MEDLINE
DOCUMENT NUMBER: 21069354 PubMed ID: 11197690
TITLE: ***IL*** - ***TIF*** /IL-22: genomic organization and mapping of the human and mouse genes.
AUTHOR: Dumoutier L; Van Roost E; Ameye G; Michaux L; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Experimental Medicine Unit, Christian de Duve Institute of Cellular Pathology, Brussels, Belgium.
SOURCE: GENES AND IMMUNITY, (2000 Dec) 1 (8) 488-94.
Journal code: 100953417. ISSN: 1466-4879.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200104
ENTRY DATE: Entered STN: 20010502
Last Updated on STN: 20010502
Entered Medline: 20010426

AB ***IL*** - ***TIF*** is a new cytokine originally identified as a gene induced by IL-9 in murine T lymphocytes, and showing 22% amino acid identity with IL-10. Here, we report the sequence and organization of the mouse and human ***IL*** - ***TIF*** genes, which both consist of 6 exons spreading over approximately 6 Kb. The ***IL*** - ***TIF*** gene is a single copy gene in humans, and is located on chromosome 12q15, at 90 Kb from the IFN gamma gene, and at 27 Kb from the AK155 gene, which codes for another IL-10-related cytokine. In the mouse, the ***IL*** - ***TIF*** gene is located on chromosome 10, also in the same region as the IFN gamma gene. Although it is a single copy gene in BALB/c and DBA/2 mice, the ***IL*** - ***TIF*** gene is duplicated in other strains such as C57Bl/6, FVB and 129. The two copies, which show 98% nucleotide identity in the coding region, were named ***IL*** - ***TIF*** alpha and ***IL*** - ***TIF*** beta. Beside single nucleotide variations, they differ by a 658 nucleotide deletion in ***IL*** - ***TIF*** beta, including the first non-coding exon and 603 nucleotides from the promoter. A DNA fragment corresponding to this deletion was sufficient to confer IL-9-regulated expression of a luciferase reporter plasmid, suggesting that the ***IL*** - ***TIF*** beta gene is either differentially regulated, or not expressed at all.

L10 ANSWER 28 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:468282 BIOSIS
DOCUMENT NUMBER: PREV200000468282
TITLE: ***IL*** - ***TIF*** induces acute phase reactant production by hepatocytes through IL-10Rbeta.
AUTHOR(S): Dumoutier, L. (1); Van Roost, E. (1); Colau, D. (1); Renauld, J.-C. (1)
CORPORATE SOURCE: (1) Brussels Branch, Ludwig Institute for Cancer Research, Brussels Belgium
SOURCE: Immunology Letters, (September, 2000) Vol. 73, No. 2-3, pp. 261. print.
Meeting Info.: 24th European Immunology Meeting of the European Federation of Immunological Societies (EFIS) Poznan, Poland September 23-26, 2000 European Federation of Immunological Societies
. ISSN: 0165-2478.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

=> d l11 ibib abs 1-4

L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:646134 CAPLUS
DOCUMENT NUMBER: 137:293113
TITLE: Cytokine and cytokine receptor pleiotropy and redundancy
AUTHOR(S): Ozaki, Katsutoshi; Leonard, Warren J.
CORPORATE SOURCE: Laboratory of Molecular Immunology, National Institutes of Health, NHLBI, Bethesda, MD, 20892-1674, USA
SOURCE: Journal of Biological Chemistry (2002), 277(33), 29355-29358
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review discusses the implications of a range of different systems wherein cytokine receptor components are shared. Type I and type II cytokines display both cytokine pleiotropy and redundancy. Multiple cases wherein these cytokines share receptor chains can be viewed as cytokine receptors pleiotropy, wherein a single chain such as .beta.c, .gamma.c, gp130, LIFR.beta., CNTFR.alpha., interleukin-7R.alpha., IL-13R.alpha.1, IL-10R.beta., IL20R.alpha., ***IL*** - ***20R*** . ***beta*** ., CNTFR.alpha., or IL-22R.alpha. exists as part of more than a single receptor.

REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2002:499938 CAPLUS
TITLE: Novel interleukins: IL-19, IL-20, IL-21, IL-22, IL-23
AUTHOR(S): Kasakura, Shinpei
CORPORATE SOURCE: Department of Medicine, Kobe City General Hospital, Japan
SOURCE: Biotherapy (Tokyo, Japan) (2002), 16(3), 193-203
CODEN: BITPE9; ISSN: 0914-2223
PUBLISHER: Gan to Kagaku Ryohosha
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Today, more than 50 cytokines have been identified and more cytokines and receptor mols. will continue to be discovered at a good pace through searches for sequence homol. in sequence databases. Recently, a family of cytokines with limited homol. to IL-10 has been identified. They include IL-10, IL-20 and IL-22. The genes of IL-10, IL-19 and IL-20 are mapped to human chromosome 1 q 31-32, whereas IL-22 is located on chromosome 12 q 15, near the IFN-.gamma. gene. These IL-10-related cytokines share receptor subunits of the class II cytokine receptor family, also known as the interferon receptor family. The IL-10R.beta. subunit is involved in both IL-10 and IL-22 signaling. The ***IL*** - ***20R*** . ***beta*** . subunit can assoc. with IL-20R.alpha., leading to a functional receptor for IL-20. IL-20 and IL-22 induce, resp., keratinocyte proliferation and acute phase reactant prodn. by liver cells. The ability of IL-22 to suppress IL-4 prodn. from Th2 cells may have therapeutic potential in the treatment of allergic diseases. For IL-19, no activity or receptor complex has been described thus far. A new class I cytokine receptor, IL-21R, was identified through searches for sequence homol. in expressed sequence tag (EST) contg. a predicted signal peptide and a predicted amphipathic helix. IL-21R is selectively expressed in lymphoid tissues. The ligand IL-21 was identified and cloned by the use of a proliferation assay based on BaF3 cells expressing IL-21R. IL-21 is most closely related to IL-2 and IL-15. IL-21 has a role in the proliferation and maturation of NK cells from bone marrow, and in the proliferation of both T and B cells. A novel cytokine, p19 was identified by searching sequence databases with a computationally derived profile of IL-6 superfamily structures. P19 shows no biol. activity by itself. It combines with the p40 subunit of IL-12 to form a novel, biol. active cytokine which is termed IL-23. The IL-12R .beta.1 subunit may be involved in both IL-12 and IL-23 signaling. Similar to IL-12, human IL-23 stimulates IFN-.gamma. prodn. and proliferation in PHA blast T cells, as well as in memory T cells.

L11 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:290532 BIOSIS
DOCUMENT NUMBER: PREV200200290532
TITLE: Lipopolysaccharide induces IL-20 expression in the primary cultured glial cells.
AUTHOR(S): Hosoi, Toru (1); Wada, Sachiyo (1); Okuma, Yasunobu (1); Nomura, Yasuyuki (1)
CORPORATE SOURCE: (1) Department of Pharmacology, Graduate School of

Pharmaceutical Sciences, Hokkaido University, Sapporo, 060-0812 Japan
SOURCE: Japanese Journal of Pharmacology, (2002) Vol. 88, No. Supplement 1, pp. 89P. http://www.pharmacol.or.jp. print. Meeting Info.: 75th Annual Meeting of the Japanese Pharmacological Society Kumamoto, Japan March 13-15, 2002 ISSN: 0021-5198.
DOCUMENT TYPE: Conference
LANGUAGE: English

L11 ANSWER 4 OF 4 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2001527384 MEDLINE
DOCUMENT NUMBER: 21448676 PubMed ID: 11564763
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L; Leemans C; Lejeune D; Kotenko S V; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Avenue Hippocrate 74, B-1200 Brussels, Belgium.
CONTRACT NUMBER: RO1 AI51139 (NIAID)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Oct 1) 167 (7) 3545-9. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204
AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20Ralpha and DIRS1/ ***IL*** - ***20Rbeta*** (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by IL-22R and DIRS1/IL20Rbeta (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

=> d l12 ibib abs 1-14

L12 ANSWER 1 OF 14 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 1
ACCESSION NUMBER: 2002-723314 [78] WPIDS
DOC. NO. CPI: C2002-204803
TITLE: Soluble heterodimeric cytokine receptor useful for down-regulating interleukin-20 and treating inflammatory diseases, such as psoriasis and asthma, comprises an interleukin-22R subunit and a interleukin-20RB subunit.
DERWENT CLASS: B04 D16
INVENTOR(S): CHANDRASEKHER, Y A; FOSTER, D C; JASPERS, S R; NOVAK, J
E; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 99
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002072607	A2	20020919	(200278)*	EN	82

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002072607	A2	WO 2002-US7214	20020307

PRIORITY APPLN. INFO: US 2001-299865P 20010621; US 2001-274560P 20010309
AN 2002-723314 [78] WPIDS
AB WO 200272607 A UPAB: 20021204
NOVELTY - An isolated soluble heterodimeric cytokine receptor (I) comprising an interleukin-22R (IL-22R) subunit which comprises a polypeptide having a sequence of 228, 211, 273, 556, 558 or 541 amino acids, and a ***IL*** - ***20RB*** subunit comprising a polypeptide having a sequence of 311, 203, 201, 201, 196, 203, 196, 201, 352, 323, 336 or 307 amino acids, where the sequences are given in the specification, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) producing (I); and
(2) host cells (II) transformed or transfected with a DNA construct that encodes the extracellular domain of IL-22R and a DNA construct that encodes the extracellular domain of ***IL*** - ***20RB*** .
ACTIVITY - Antiinflammatory; Antipsoriatic; Antiallergic; Dermatological; Antibacterial; Immunosuppressive; Antiasthmatic; Antiulcer.
MECHANISM OF ACTION - IL-20 inhibitor. No biological data is given.
USE - (I) is useful for down-regulating IL-20 and thus treating inflammatory diseases, such as psoriasis, adult respiratory disease, septic shock, multiple organ failure, inflammatory lung injury such as asthma or bronchitis, bacterial pneumonia, eczema, atopic and contact dermatitis, ulcerative colitis and Crohn's disease.
Dwg.0/8

L12 ANSWER 2 OF 14 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 2
ACCESSION NUMBER: 2002-425815 [45] WPIDS
DOC. NO. CPI: C2002-120579
TITLE: Method of down-regulating IL-19 useful for treating inflammation comprises administration of a polypeptide comprised of the extracellular domain of ***IL*** - ***20RA*** and ***IL*** - ***20RB*** .
DERWENT CLASS: B04
INVENTOR(S): CHANDRASEKHER, Y A; JASPERS, S R
PATENT ASSIGNEE(S): (CHAN-I) CHANDRASEKHER Y A; (JASP-I) JASPERS S R; (ZYMO)
ZYMOGENETICS INC
COUNTRY COUNT: 97
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002022153	A2	20020321	(200245)*	EN	41

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO
RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2002085992 A1 20020704 (200247)
AU 2001090837 A 20020326 (200251)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002022153	A2	WO 2001-US28557	20010913
US 2002085992	A1 Provisional	US 2000-233305P	20000915
		US 2001-951268	20010913
AU 2001090837	A	AU 2001-90837	20010913

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001090837	A Based on	WO 200222153

PRIORITY APPLN. INFO: US 2000-233305P 20000915; US 2001-951268 20010913
AN 2002-425815 [45] WPIDS
AB WO 200222153 A UPAB: 20020717
NOVELTY - Method of down-regulating IL-19 comprises administration of a polypeptide comprised of the extracellular domain of ***IL*** - ***20RA*** and the extracellular domain of ***IL*** - ***20RB*** .
ACTIVITY - Antiinflammatory; Cytostatic; Antiarthritic; Antibacterial; Dermatological; Ophthalmological; Antiarteriosclerotic; Vasotropic; Antirheumatic; Antidiabetic.
MECHANISM OF ACTION - IL-19 antagonist; mda7 antagonist.
USE - For down-regulating IL-19, useful for the treatment of inflammation e.g. in diabetes, artherosclerosis, cataracts, reperfusion injury, cancer, infectious meningitis, rheumatic fever, systemic lupus erythematosus and rheumatoid arthritis.
A neutralization assay of IL-19 was performed to determine if the soluble ***IL*** - ***20RA*** / ***IL*** - ***20RB*** heterodimeric receptor could neutralize IL-19.
Baby hamster kidney cells expressing the ***IL*** - ***20RA*** /

IL - ***20RB*** receptor were plated at 1000 cells/well in a 96 well plate. On day 2 the cells were replated into a serum free medium to down regulate their response, and on day 3 three different solutions containing IL-19 were made (0.1 ng/ml, 1 ng/ml and 10 ng/ml). As a control, 100 micro l aliquots of each solution were placed in different wells to determine the level of proliferation of the cells caused by IL-19. The soluble IL-20A/IL-20B receptor of concentration 10 micro g/ml were mixed with 100 micro l of each IL-19 solution, vortexed and the solutions were left at room temperature for 30 minutes. The solutions were loaded in triplicate in the wells and the plates were incubated at 37 deg. C for 4 hours, then read on a luminometer. The results showed that the soluble receptor neutralized some of the IL-19's activity at all three concentrations (especially the higher one) when compared to IL-19's activity alone.
Dwg.0/0

L12 ANSWER 3 OF 14 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-507215 [54] WPIDS
CROSS REFERENCE: 2001-418045 [44]
DOC. NO. CPI: C2002-144150
TITLE: Treating inflammatory skin and lung diseases using antibodies against interleukins (IL)-20 (which indirectly modulates activation of IL-8), useful for treating e.g. psoriasis, asthma and bronchitis.
DERWENT CLASS: B04 D16
INVENTOR(S): BLUMBERG, H; CHANDRASEKHER, Y A; EAGAN, M A; FOSTER, D C;
JASPERS, S R; KELLY, J D; MADDEN, K L; NOVAK, J E; SPRECHER, C A; THOMPSON, P; XU, W
PATENT ASSIGNEE(S): (BLUM-I) BLUMBERG H; (CHAN-I) CHANDRASEKHER Y A; (EAGA-I)
EAGAN M A; (FOST-I) FOSTER D C; (JASP-I) JASPERS S R; (KELL-I) KELLY J D; (MADD-I) MADDEN K L; (NOVA-I) NOVAK J E; (SPRE-I) SPRECHER C A; (THOM-I) THOMPSON P; (XUWW-I) XU W
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002042366	A1	20020411	(200254)*		1

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2002042366	A1	Provisional US 1999-171969P	19991223
		Provisional US 2000-213341P	20000622
		US 2000-746359	20001222

PRIORITY APPLN. INFO: US 2000-746359 20001222; US 1999-171969P 19991223; US 2000-213341P 20000622
AN 2002-507215 [54] WPIDS
CR 2001-418045 [44]
AB US2002042366 A UPAB: 20020823
NOVELTY - A method (I) for treating a mammal afflicted with a disease in which an interleukin-20 (IL-20) polypeptide plays a role (the IL-20 polypeptide comprises 9 defined amino acid sequences (A1-A9) given in the specification), comprising administering antagonist of the IL-20 polypeptide to the individual, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) promoting (M1) the expression of IL-8 in a cell comprising bringing the cell into contact with IL-20; and
(2) increasing (M2) the expression of IL-8 in an individual comprising administering IL-20 to the individual.
ACTIVITY - Dermatological; antipsoriatic; antiinflammatory; respiratory; antiasthmatic.
No biological data given.
MECHANISM OF ACTION - Antibody inhibition; modulation of IL-20 expression and activity.
An important cytokine in the inflammatory process is interleukin-8 (IL-8). IL-8 is a chemokine that acts as an agonist for neutrophils via chemotaxis and the release of granule enzymes. IL-8 binds to two receptors on neutrophils. IL-8 receptors are also found on monocytes, basophils, and eosinophils. In human fibroblasts, cytomegalovirus has been shown to induce the expression of IL-8 receptors and to replicate more rapidly when cells are exposed to IL-8. IL-8 is a potent chemoattractant for neutrophils; and the early stages of periodontal disease are characterized by the influx of neutrophils. IL-8 is a potent inducer of angiogenesis in several angiogenesis-dependent chronic inflammatory conditions, including rheumatoid arthritis, psoriasis, and idiopathic pulmonary fibrosis. Additionally, IL-8 is an important source of angiogenic activity in human lung cancer. Also, IL-8 expression correlates with experimental metastatic activity of some melanoma cell lines. Therefore an effective method to treat inflammatory diseases would be to administer an agent that would inhibit IL-8. It has been shown that IL-20 up-regulates IL-8. Therefore antagonists to IL-20 can be used to treat these diseases.
USE - The method is used for treating diseases in which the IL-20 polypeptide plays a role e.g. a skin disease (psoriasis, eczema, atopic dermatitis and contact dermatitis) or an inflammatory lung disease (adult respiratory disease, asthma, bronchitis and pneumonia) (claimed).
Dwg.0/0

L12 ANSWER 4 OF 14 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2002696027 IN-PROCESS
DOCUMENT NUMBER: 22344641 PubMed ID: 12351624
TITLE: Interleukins 19, 20, and 24 Signal through Two Distinct Receptor Complexes. DIFFERENCES IN RECEPTOR-LIGAND INTERACTIONS MEDIATE UNIQUE BIOLOGICAL FUNCTIONS.
AUTHOR: Parrish-Novak Julia; Xu Wenfeng; Brender Ty; Yao Lena; Jones Crystal; West Jim; Brandt Cameron; Jelinek Laura; Madden Karen; McKernan Patricia A; Foster Donald C; Jaspers Stephen; Chandrasekher Yasmin A
CORPORATE SOURCE: Departments of Cytokine and Receptor Biology, In Vitro Biology, and Genetics, ZymoGenetics, Inc., Seattle, Washington 98102.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Dec 6) 277 (49) 47517-23.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021217
Last Updated on STN: 20021217
AB Cytokines that signal through Class II receptors form a distinct family that includes the interferons and interleukin 10 (IL-10). Recent identification of several IL-10 homologs has defined a cytokine subfamily that includes AK155, IL-19, IL-20, IL-22, and IL-24. Within this subfamily, IL-19, IL-20, and IL-24 exhibit substantial sharing of receptor complexes; all three are capable of signaling through ***IL*** - ***20RA*** / ***IL*** - ***20RB*** , and IL-20 and IL-24 both can also use IL-22R/ ***IL*** - ***20RB*** . However, the biological effects of these three cytokines appear quite distinct: immune activity with IL-19, skin biology with IL-20, and tumor apoptosis with IL-24. To more fully elucidate their interactions with the receptor complexes, we have performed a series of in vitro assays. Reporter, proliferation, and direct STAT activation assays using cell lines expressing transfected receptors revealed differences between the receptor complexes. IL-19 and IL-24 also exhibited growth inhibition on a cell line endogenously expressing all three receptor subunits, an effect that was seen at cytokine levels two orders of magnitude above those required for STAT activation or proliferation. These results demonstrate that, although this subclass exhibits receptor complex redundancy, there are differences in ligand/receptor interactions and in signal transduction that may lead to specificity and a distinct biology for each cytokine.

L12 ANSWER 5 OF 14 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2002126257 MEDLINE
DOCUMENT NUMBER: 21850613 PubMed ID: 11706020
TITLE: Interleukin 24 (MDA-7/MOB-5) signals through two heterodimeric receptors, IL-22R1/ ***IL*** - ***20R2*** and ***IL*** - ***20R1*** / ***IL*** - ***20R2***
.
AUTHOR: Wang Mai; Tan Zhongjia; Zhang Rong; Kotenko Sergei V; Liang Peng
CORPORATE SOURCE: Vanderbilt-Ingram Cancer Center, Department of Cancer Biology, School of Medicine, Vanderbilt University, Nashville, TN 37232, USA.
CONTRACT NUMBER: AI 51139 (NIAID)
CA 68485 (NCI)
CA 74067 (NCI)
CA 76960 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Mar 1) 277 (9) 7341-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200204
ENTRY DATE: Entered STN: 20020226
Last Updated on STN: 20020403
Entered Medline: 20020401
AB Interleukin 24 (IL-24) encodes a secreted protein that exhibits significant homology to the interleukin 10 (IL-10) family of cytokines. Here we show that the human IL-24 is secreted by activated peripheral blood mononuclear cells and is the ligand for two heterodimeric receptors, IL-22R1/ ***IL*** - ***20R2*** and ***IL*** - ***20R1*** / ***IL*** - ***20R2*** . The latter is also the receptor for IL-20. COS cells transfected with either IL-24 receptor heterodimers bind the ligand with similar saturation kinetics. IL-24 binding to either its endogenous receptors on human keratinocytes or to ectopically expressed receptors on baby hamster kidney cells leads to activation of the signal transducers

and activators of transcription. Taken together, these results provide compelling evidence for IL-24 being the fourth member of IL-10 family of cytokines to which their specific receptors have been identified.

L12 ANSWER 6 OF 14 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2002286904 MEDLINE
DOCUMENT NUMBER: 22018114 PubMed ID: 12023331
TITLE: Cutting edge: immune cells as sources and targets of the IL-10 family members?.
AUTHOR: Wolk Kerstin; Kunz Stefanie; Asadullah Khusru; Sabat Robert
CORPORATE SOURCE: Department of Experimental Dermatology, Schering AG, and Institute of Medical Immunology, Medical School Charite, Humboldt University, Berlin, Germany.
SOURCE: JOURNAL OF IMMUNOLOGY, (2002 Jun 1) 168 (11) 5397-402. Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200206
ENTRY DATE: Entered STN: 20020528
Last Updated on STN: 20020613
Entered Medline: 20020612
AB This study investigated the expression of five novel human IL-10-related molecules and their receptors in blood mononuclear cells. IL-19 and IL-20 were found to be preferentially expressed in monocytes. IL-22 and IL-26 (AK155) expression was exclusively detected in T cells, especially upon type 1 polarization, and in NK cells. IL-24 (melanoma differentiation-associated gene 7) expression was restricted to monocytes and T cells. Detection of these molecules in lymphocytes was predominantly linked to cellular activation. Regarding T cells, IL-26 was primarily produced by memory cells, and its expression was independent on costimulation. In contrast to the high expression of receptors for IL-10 homologs in different tissues and cell lines, monocytes and NK, B, and T cells showed clear expression only of IL-10R1, IL-10R2, and ***IL*** - ***20R2*** . In these cells, ***IL*** - ***20R2*** might be part of a still-unknown receptor complex. Therefore, immune cells may represent a major source but a minor target of the novel IL-10 family members.

L12 ANSWER 7 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:409467 BIOSIS
DOCUMENT NUMBER: PREV200200409467
TITLE: Identification of the functional receptors of interleukin-24 (Mob-5/Mda-7.
AUTHOR(S): Wang, Mai (1); Tan, Zhongjia; Kotenko, Sergei V.; Liang, Peng
CORPORATE SOURCE: (1) Department of Cancer Biology, Vanderbilt University School of Medicine, Nashville, TN USA
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2002) Vol. 43, pp. 829. print. Meeting Info.: 93rd Annual Meeting of the American Association for Cancer Research San Francisco, California, USA April 06-10, 2002
ISSN: 0197-016X.
DOCUMENT TYPE: Conference
LANGUAGE: English

L12 ANSWER 8 OF 14 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 2002725014 IN-PROCESS
DOCUMENT NUMBER: 22375351 PubMed ID: 12486876
TITLE: The family of IL-10-related cytokines and their receptors: related, but to what extent?.
AUTHOR: Kotenko Sergei V
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, New Jersey Medical School, University of Medicine and Dentistry, 185 South Orange Avenue, MSB E-631, Newark, NJ 07103, USA.. kotenkse@umdnj.edu
CONTRACT NUMBER: RO1 AI51139-01 (NIAID)
SOURCE: CYTOKINE AND GROWTH FACTOR REVIEWS, (2002 Jun) 13 (3) 223-40. Journal code: 9612306. ISSN: 1359-6101.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021219
Last Updated on STN: 20021219
AB Five novel cytokines (IL-19, IL-20, IL-22 (IL-TIF), IL-24 (human MDA-7, mouse FISP, rat C49A/Mob-5), and IL-26 (AK155)) demonstrating limited primary sequence identity and probable structural homology to IL-10 have been identified. These cellular cytokines, as well as several cytokines encoded in viral genomes (viral cytokines), form a family of IL-10-related cytokines or the IL-10 family. These cytokines share not only homology but also receptor subunits and perhaps activities. Receptors for these cytokines belong to the class II cytokine receptor family. The receptors are IL-10R2 (CRF2-4), IL-22R1 (CRF2-9), IL-22BP (CRF2-10), ***IL*** - ***20R1*** (CRF2-8) and ***IL*** - ***20R2*** (CRF2-11). Biological activities of these cytokines, receptor utilization and signaling, as well as expression patterns for cytokines and their receptors are summarized. Although data indicate that these cytokines are involved in regulation of inflammatory and immune responses, their major functions remain to be discovered.

L12 ANSWER 9 OF 14 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002237530 EMBASE
TITLE: Novel interleukins - IL-19, IL-20, IL-21, IL-22, IL-23.
AUTHOR: Kasakura S.
CORPORATE SOURCE: Dr. S. Kasakura, Kobe City General Hospital, 6-4 Minatojima-Nakamachi, Chuo-ku, Kobe 650-0046, Japan
SOURCE: Biotherapy, (2002) 16/3 (193-203). Refs: 32
ISSN: 0914-2223 CODEN: BITPE
COUNTRY: Japan
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: Japanese
SUMMARY LANGUAGE: English; Japanese
AB Today, more than 50 cytokines have been identified and more cytokines and receptor molecules will continue to be discovered at a good pace through searches for sequence homology in sequence databases. Recently, a family of cytokines with limited homology to IL-10 has been identified. They include IL-10, IL-20 and IL-22. The genes of IL-10, IL-19 and IL-20 are mapped to human chromosome 1 q 31-32, whereas IL-22 is located on chromosome 12 q 15, near the IFN-.gamma. gene. These IL-10-related cytokines share receptor subunits of the class II cytokine receptor family, also known as the interferon receptor family. The IL-10R.beta. subunit is involved in both IL-10 and IL-22 signaling. The IL-20R.beta. subunit can associate with IL-20R.alpha., leading to a functional receptor for IL-20. IL-20 and IL-22 induce, respectively, keratinocyte proliferation and acute phase reactant production by liver cells. The ability of IL-22 to suppress IL-4 production from Th2 cells may have therapeutic potential in the treatment of allergic diseases. For IL-19, no activity or receptor complex has been described thus far. A new class I cytokine receptor, IL-21R, was identified through searches for sequence homology in expressed sequence tag (EST) containing a predicted signal peptide and a predicted amphipathic helix. IL-21R is selectively expressed in lymphoid tissues. The ligand IL-21 was identified and cloned by the use of a proliferation assay based on BaF3 cells expressing IL-21R. IL-21 is most closely related to IL-2 and IL-15. IL-21 has a role in the proliferation and maturation of NK cells from bone marrow, and in the proliferation of both T and B cells. A novel cytokine, p19 was identified by searching sequence databases with a computationally derived profile of IL-6 superfamily structures. p19 shows no biological activity by itself. It combines with the p40 subunit of IL-12 to form a novel, biologically active cytokine which is termed IL-23. The IL-12R.beta.(1) subunit may be involved in both IL-12 and IL-23 signaling. Similar to IL-12, human IL-23 stimulates IFN-.gamma. production and proliferation in PHA blast T cells, as well as in memory T cells.

L12 ANSWER 10 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:290532 BIOSIS
DOCUMENT NUMBER: PREV200200290532
TITLE: Lipopolysaccharide induces IL-20 expression in the primary cultured glial cells.
AUTHOR(S): Hosoi, Toru (1); Wada, Sachiyo (1); Okuma, Yasunobu (1); Nomura, Yasuyuki (1)
CORPORATE SOURCE: (1) Department of Pharmacology, Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, 060-0812 Japan
SOURCE: Japanese Journal of Pharmacology, (2002) Vol. 88, No. Supplement 1, pp. 89P. http://www.pharmacol.or.jp. print. Meeting Info.: 75th Annual Meeting of the Japanese Pharmacological Society Kumamoto, Japan March 13-15, 2002
ISSN: 0021-5198.
DOCUMENT TYPE: Conference
LANGUAGE: English

L12 ANSWER 11 OF 14 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 7
ACCESSION NUMBER: 2001-418045 [44] WPIDS
CROSS REFERENCE: 2002-507215 [54]
DOC. NO. CPI: C2001-126398
TITLE: Treating interleukin-20 induced inflammation in a mammal, such as adult respiratory disease, eczema, psoriasis, contact dermatitis, multiple organ failure and septic shock, involves administering IL-20 antagonist.
DERWENT CLASS: B04 D16
INVENTOR(S): BLUMBERG, H; CHANDRASEKHER, J A; EAGAN, M A; FOSTER, D C; JASPERS, S R; KELLY, J D; MADDEN, K L; NOVAK, J E; SPRECHER, C A; THOMPSON, P; WENFENG, X
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001046261	A1	20010628	(200144)*	EN	117

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI
SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001024580 A 20010703 (200164)
EP 1244708 A1 20021002 (200265) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001046261	A1	WO 2000-US35305	20001222
AU 2001024580	A	AU 2001-24580	20001222
EP 1244708	A1	EP 2000-988365	20001222
		WO 2000-US35305	20001222

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001024580	A Based on	WO 200146261
EP 1244708	A1 Based on	WO 200146261

PRIORITY APPLN. INFO: US 2000-213341P 20000622; US 1999-470898 19991223
AN 2001-418045 [44] WPIDS
CR 2002-507215 [54]
AB WO 200146261 A UPAB: 20021010
NOVELTY - Treating a mammal afflicted with a disease in which an interleukin-20 (IL-20) polypeptide plays a role, where IL-20 polypeptide comprises a sequence (S1) of 176, 152, 151, 127, 176, 152, 144, 154 or 130 amino acids fully defined in the specification, involves administering antagonist (I) of IL-20 polypeptide to the individual.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) promoting the expression of IL-8 in a cell, by bringing the cell into contact with IL-20; and
(2) increasing the expression of IL-8 in an individual, by administering IL-20 to the individual.
ACTIVITY - Antipsoriatic; dermatological; antiasthmatic; antiinflammatory; antibacterial; immunosuppressive; antiulcer; antirheumatic; antiarthritic.
MECHANISM OF ACTION - IL-20 antagonist (claimed). No supporting data given.
USE - (I) is useful for treating psoriasis, eczema, atopic dermatitis, contact dermatitis, adult respiratory disease, asthma, bronchitis and pneumonia (claimed). (I) is also useful for treating multiple organ failure, inflammatory lung injury, septic shock, bacterial pneumonia, inflammatory bowel disease, rheumatoid arthritis, ulcerative colitis and Crohn's disease.
Dwg.0/8

L12 ANSWER 12 OF 14 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 8
ACCESSION NUMBER: 2001-398320 [42] WPIDS
DOC. NO. CPI: C2001-121173
TITLE: Isolated interleukin 20 soluble receptor comprising two polypeptide subunits ***IL*** - ***20RA*** and ***IL*** - ***20RB*** , useful for down-regulating IL-20 and thus treating inflammatory diseases such as psoriasis.
DERWENT CLASS: B04
INVENTOR(S): BRANDT, C S; FOSTER, D C; FOX, B A; KELLY, J D; MADDEN, K L; PRESNELL, S R; RIXON, M W; SPRECHER, C A; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001046232	A2	20010628	(200142)*	EN	119

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI
SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001022925 A 20010703 (200164)
EP 1246846 A2 20021009 (200267) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001046232	A2	WO 2000-US35307	20001222
AU 2001022925	A	AU 2001-22925	20001222
EP 1246846	A2	EP 2000-986743	20001222
		WO 2000-US35307	20001222

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001022925	A Based on	WO 200146232
EP 1246846	A2 Based on	WO 200146232

PRIORITY APPLN. INFO: US 2000-213416P 20000622; US 1999-471774 19991223
AN 2001-398320 [42] WPIDS
AB WO 200146232 A UPAB: 20010726
NOVELTY - An isolated interleukin 20 (IL-20) soluble receptor comprising two polypeptide subunits ***IL*** - ***20RA*** (formerly known as ZcytoR7) and ***IL*** - ***20RB*** (formerly known as DIRS1), is new.
DETAILED DESCRIPTION - An isolated interleukin 20 (IL-20) soluble receptor comprising two polypeptide subunits ***IL*** - ***20RA*** (formerly known as ZcytoR7) and ***IL*** - ***20RB*** (formerly known as DIRS1), is new.
The ***IL*** - ***20RA*** subunit comprises the 221, 217, 217, 214 or 207 amino acid sequence defined in the specification. The ***IL*** - ***20RB*** subunit comprises the 203, 201, 201, 196, 203 or 196 amino acid sequence defined in the specification.
INDEPENDENT CLAIMS are also included for the following:
(1) a soluble IL-20 receptor comprised of a first polypeptide disulfide bonded to second polypeptide, where the first polypeptide comprises the 571 (extracellular domain of IL-RA fused to a mutated human Ig gamma 1 constant region) or 547 (mature sequence of the extracellular domain of IL-RA fused to a mutated human Ig gamma 1 constant region minus the signal sequence) amino acid sequence defined in the specification, and the second polypeptide comprises the 336 (extracellular domain of IL-RB fused to a wild-type human Ig kappa light chain constant region) or 307 (mature sequence of the extracellular domain of IL-RB fused to a wild-type human Ig kappa light chain constant region minus the signal sequence) amino acid sequence defined in the specification;
(2) a soluble receptor comprised of a first polypeptide disulfide bonded to second polypeptide, where the first polypeptide comprises the 594 or 559 amino acid sequence (representing the constant regions of an Ig heavy chain) defined in the specification, and the second polypeptide comprises the 352 or 323 amino acid sequence (representing the constant regions of an Ig light chain) defined in the specification; and
(3) a protein having a first polypeptide and a second polypeptide where the first polypeptide comprises the 150 amino acid sequence defined in the specification and the second polypeptide comprises the 135 or another 135 amino acid sequence defined in the specification.
ACTIVITY - Antiinflammatory; , antipsoriatic; antiasthmatic; antibacterial; dermatological; antiulcer.
No biological data given.
MECHANISM OF ACTION - IL-20 soluble receptor; antagonist.
No biological data given.
USE - The soluble receptor can be used to down-regulate IL-20 and thus treat inflammatory diseases such as psoriasis, inflammatory lung injury such as asthma or bronchitis, adult respiratory disease (ARD), septic shock, multiple organ failure, bacterial pneumonia, eczema, atopic and contact dermatitis, and inflammatory bowel disease such as ulcerative colitis and Crohn's disease.
Dwg.0/8

L12 ANSWER 13 OF 14 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001343823 EMBASE
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L.; Leemans C.; Lejeune D.; Kotenko S.V.; Renauld J.-C.
CORPORATE SOURCE: Dr. J.-C. Renauld, Ludwig Institute for Cancer Research, Avenue Hippocrate, 74, B-1200 Brussels, Belgium. Jean-Christophe.Renauld@bru.licr.org
SOURCE: Journal of Immunology, (1 Oct 2001) 167/7 (3545-3549). Refs: 17

ISSN: 0022-1767 CODEN: JOIMA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20R.alpha. and DIRS1/IL-20R.beta. (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by IL-22R and DIRS1/IL20R.beta. (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

L12 ANSWER 14 OF 14 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 95123572 MEDLINE
DOCUMENT NUMBER: 95123572 PubMed ID: 7823251
TITLE: HLA-DR antigen expression and lymphocyte subsets in transitional cell carcinoma of the urinary bladder. An immunohistological study on frozen sections.
AUTHOR: Ioachim-Velogianni E; Stavropoulos N E; Kitsiou E; Stefanaki S; Agnantis N J
CORPORATE SOURCE: Department of Pathology, University of Ioannina, Medical School, Greece.
SOURCE: JOURNAL OF PATHOLOGY, (1994 Nov) 174 (3) 183-9. Journal code: 0204634. ISSN: 0022-3417.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199502
ENTRY DATE: Entered STN: 19950223
Last Updated on STN: 19950223
Entered Medline: 19950216
AB Lymphocyte subpopulations (B cells, CD4, CD8), ***interleukin*** - ***20*** ***receptors*** (IL-2), monocytes/macrophages (Leu M5), and HLA-DR antigen expression were studied immunohistochemically on frozen sections from 38 bladder cancer specimens. T cells predominated over B cells in all tumours. CD4-positive lymphocytes predominated over CD8 in the stroma (CD4/CD8: 1.35/l), while in epithelial tumour cells CD8 was the prominent subpopulation (CD8/CD4: 1.75/l). Aberrant HLA-DR expression was found in 21.05 per cent of bladder tumours. A strong correlation between CD4 and CD8 population densities and macrophages with the other subpopulations was noticed. In HLA-DR-positive tumours, there was no correlation of the percentage of positive cells with CD4- and CD8-positive lymphocyte populations. Various parameters including IL-2 receptors, B cells, CD8- and CD4-positive cells, and macrophages did not differ significantly between the groups of tumours expressing and not expressing HLA-DR antigen. There were no statistically significant differences in the population densities of B cells, CD8- or CD4-positive cells, IL-2 receptor, monocytes/macrophages, and HLA-DR antigen expression among various clinicopathological parameters, including growth pattern, histological grade and clinical stage or patient's age and sex. These findings suggest that in transitional cell carcinoma of the urinary bladder, HLA-DR antigen expression is independent of lymphocyte subpopulations. It is therefore possible that HLA-DR expression by tumour cells reflect the existence of separate HLA-DR-positive or HLA-DR-negative tumour clones.

=> log off
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y
STN INTERNATIONAL LOGOFF AT 14:09:33 ON 27 DEC 2002

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L1          76 S INTERLEUKIN-22 RECEPTOR# OR INTERLEUKIN 22 RECEPTOR# OR IL-9
L2           8 S INTERLEUKIN-20 RECEPTOR BETA OR INTERLEUKIN-20 RECEPTOR-BETA
L3          13 S  INTERLEUKIN-20 RECEPTOR#
L4          34 S  INTERLEUKIN-20 RECEPTOR# OR IL-20R!
L5           1 S L1 AND L2
L6           1 S L1 AND L2
L7           7 S L1 AND L4
L8           1 S L1 AND L3
L9           3 DUP REM L7 (4 DUPLICATES REMOVED)
L10         28 DUP REM L1 (48 DUPLICATES REMOVED)
L11          4 DUP REM L2 (4 DUPLICATES REMOVED)
L12         14 DUP REM L4 (20 DUPLICATES REMOVED)

=>
```

********** STN Columbus **********

=> il-20rb or dirs1
L1 29 IL-20RB OR DIRS1

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2 17 DUP REM L1 (12 DUPLICATES REMOVED)

=> l2 and (il-22? or interleukin-22)
TERM '22?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED
5 FILES SEARCHED...
TERM '22?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED
L3 16 L2 AND (IL-22? OR INTERLEUKIN-22)
You have entered a truncated stem which occurs in too many terms.
Make the stem longer and try again. For example, if your original
term was 'degr?' to search for variations and the abbreviation for
'degradation', you could replace it with the expression '(degrdn OR
degrad?)'. If your search term was numeric, e.g., 'C>5', reduce the
size of the range.

=> l2 and (il-22 receptor? or il-22r? or il-9 inducible gene or il-tif or il-10 related t cell derived inducible factor)
3 FILES SEARCHED...
6 FILES SEARCHED...
L4 4 L2 AND (IL-22 RECEPTOR? OR IL-22R? OR IL-9 INDUCIBLE GENE OR IL-TIF OR IL-10 RELATED T CELL DERIVED INDUCIBLE FACTOR)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 4 DUP REM L4 (0 DUPLICATES REMOVED)

=> d l5 ibib abs 1-4

L5 ANSWER 1 OF 4 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-723314 [78] WPIDS
DOC. NO. CPI: C2002-204803
TITLE: Soluble heterodimeric cytokine receptor useful for down-regulating interleukin-20 and treating inflammatory diseases, such as psoriasis and asthma, comprises an interleukin-22R subunit and a interleukin-20RB subunit.
DERWENT CLASS: B04 D16
INVENTOR(S): CHANDRASEKHER, Y A; FOSTER, D C; JASPERS, S R; NOVAK, J E; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 99
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002072607	A2	20020919	(200278)*	EN	82

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002072607	A2	WO 2002-US7214	20020307

PRIORITY APPLN. INFO: US 2001-299865P 20010621; US 2001-274560P 20010309
AN 2002-723314 [78] WPIDS
AB WO 200272607 A UPAB: 20021204
NOVELTY - An isolated soluble heterodimeric cytokine receptor (I) comprising an interleukin-22R (***IL*** - ***22R***) subunit which comprises a polypeptide having a sequence of 228, 211, 273, 556, 558 or 541 amino acids, and a ***IL*** - ***20RB*** subunit comprising a polypeptide having a sequence of 311, 203, 201, 201, 196, 203, 196, 201, 352, 323, 336 or 307 amino acids, where the sequences are given in the specification, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) producing (I); and
(2) host cells (II) transformed or transfected with a DNA construct that encodes the extracellular domain of ***IL*** - ***22R*** and a DNA construct that encodes the extracellular domain of ***IL*** - ***20RB*** .
ACTIVITY - Antiinflammatory; Antipsoriatic; Antiallergic; Dermatological; Antibacterial; Immunosuppressive; Antiasthmatic; Antiulcer.
MECHANISM OF ACTION - IL-20 inhibitor. No biological data is given.
USE - (I) is useful for down-regulating IL-20 and thus treating inflammatory diseases, such as psoriasis, adult respiratory disease, septic shock, multiple organ failure, inflammatory lung injury such as asthma or bronchitis, bacterial pneumonia, eczema, atopic and contact dermatitis, ulcerative colitis and Crohn's disease.
Dwg.0/8

L5 ANSWER 2 OF 4 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-217182 [27] WPIDS
DOC. NO. CPI: C2002-066484
TITLE: New soluble cytokine receptor which binds interleukin-T-cell inducible factor and antagonizes its activity in inflammatory and immune diseases such as cancer, diabetes, asthma, sepsis, psoriasis and autoimmune diseases.
DERWENT CLASS: B04 D16
INVENTOR(S): KINDSVOGEL, W R; TOPOUZIS, S
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002012345	A2	20020214	(200227)*	EN	117

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001090524 A 20020218 (200244)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002012345	A2	WO 2001-US24838	20010808
AU 2001090524	A	AU 2001-90524	20010808

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001090524	A Based on	WO 200212345

PRIORITY APPLN. INFO: US 2000-250876P 20001201; US 2000-223827P 20000808
AN 2002-217182 [27] WPIDS
AB WO 200212345 A UPAB: 20020429
NOVELTY - An isolated soluble cytokine receptor polypeptide (I), designated zcytor11 comprising a sequence (S1) of 211 amino acids defined in the specification or a sequence 90% identical to (S1) and which binds interleukin-T-cell inducible factor (***IL*** - ***TIF***) or antagonizes ***IL*** - ***TIF*** activity, where (I) forms homodimeric, heterodimeric or multimeric receptor complex, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) an isolated polynucleotide (II) that encodes (I), where the polypeptide encoded by the polynucleotide sequence binds or antagonizes ***IL*** - ***TIF*** having a sequence of 179 amino acids defined in the specification;
(2) an expression vector (III) comprising operably linked a transcription promoter, a first DNA segments encoding (I) and a transcription terminator; and a second transcription promoter, a second DNA segment encoding a soluble class I or class II cytokine receptor polypeptide, and a transcription terminator, where the first and second DNA segments are contained within a single expression vector or are contained within independent expression vectors;
(3) a culture cell (IV) comprising (III), and which expresses the polypeptides encoded by the DNA segments;
(4) a DNA construct (V) encoding a fusion protein comprising a first DNA segment encoding (I), and at least one other DNA segment encoding a soluble class I or class II cytokine receptor polypeptide, where the first and second other DNA segments are connected-in-frame and encode the fusion protein;
(5) an expression vector comprising a transcription promoter, (V) and a transcription terminator, where the promoter is operably linked to the DNA construct which is linked to the transcription terminator;
(6) a cultured cell (VI) comprising the above vector;
(7) an isolated heterodimeric or multimeric soluble receptor complex, comprising soluble receptor subunits comprising (I);
(8) producing (I); and
(9) an antibody produced by using (I) which specifically binds to a homodimeric, heterodimeric or multimeric receptor complex comprising a soluble cytokine receptor polypeptide.

ACTIVITY - Antidiabetic; Antiinflammatory; Cytostatic; Antithyroid; Immunosuppressive; Antibacterial; Antiasthmatic; Antipsoriatic; Neuroprotective; Dermatological; Antirheumatic; Antiarthritic; Antiallergic. No supporting data is given.

MECHANISM OF ACTION - Antagonist of ***IL*** - ***TIF*** .

USE - (I) is useful for reducing ***IL*** - ***TIF*** - or IL-9 induced inflammation, and inhibiting ***IL*** - ***TIF*** -induced proliferation of hematopoietic cells and their progenitors, especially lymphoid cells such as macrophages or T cells, by culturing bone marrow or peripheral blood cells with a composition comprising (I) to reduce proliferation of the hematopoietic cells in the bone marrow or peripheral blood cells as compared to bone marrow or peripheral blood cells cultured in the absence of soluble cytokine receptor. (I) is also useful for suppressing an immune response in a mammal exposed to an antigen or pathogen, by determining a level of an antigen- or pathogen-specific antibody, administering a composition comprising (I), determining a post administration level of antigen- or pathogen-specific antibody, and comparing the level of antibody before administration to the level of antibody after administration, where a lack of increase or a decrease in antibody level is indicative of suppressing an immune response. (I) is further useful for producing an antibody to soluble cytokine receptor polypeptide. (VI) is useful for producing a fusion protein (claimed). Soluble zcytor11 receptor or heterodimeric polypeptide is useful for enhancing the in vivo killing of target tissues by directly stimulating a zcytor11 receptor-modulated apoptotic pathway, resulting in cell death of hyperproliferative cells expressing zcytor11 receptor or a zcytor11 heterodimeric receptor, such as soluble zcytor11/CRF2-4 receptor. ***IL*** - ***TIF*** is involved in promoting Th1-type immune responses and antagonist of ***IL*** - ***TIF*** have beneficial use against diseases involving such immune responses. (I) is useful as cytokine antagonist and for detecting ligands that stimulate the proliferation and/or development of hematopoietic, lymphoid and myeloid cells in vitro and in vivo. Soluble zcytor11 heterodimers are useful as antagonists in inflammatory and immune diseases or conditions such as pancreatitis, type I diabetes (IDDM), pancreatic cancer, Graves disease, inflammatory bowel disease (IBD), Crohn's disease, colon and intestinal cancer, diverticulosis, autoimmune disease, sepsis, asthma, end-stage renal disease, psoriasis, organ or bone marrow transplant and kidney dysfunction. Soluble zcytor11 receptor or heterodimeric receptor polypeptides are useful in vivo or in diagnostic applications to detect ***IL*** - ***TIF*** expressing cancers in vivo or in tissue samples and to prepare antibodies. Antibodies recognizing zcytoR11, soluble zcytoR11/CRF2-4 heterodimers, and multimers are useful to antagonize or agonize signaling by the ***IL*** - ***TIF*** receptors in the treatment of autoimmune disease such as IDDM, multiple sclerosis (MS), systemic lupus erythematosus (SLE), myasthenia gravis, rheumatoid arthritis and IBD. Anti-soluble zcytor11, anti-soluble zcytoR11/CRF2-4 heterodimer or multimer monoclonal antibody (MAb) is useful as an antagonist to deplete unwanted immune cells to treat autoimmune disease such asthma, allergy and other atopic disease. ZcytoR11 serves as a target for MAb therapy of cancer where an antagonizing MAb inhibits cancer growth and targets immune-mediated killing. Antibodies to soluble zcytor11 receptor or heterodimeric polypeptide are useful for tagging cells that express the corresponding receptors and assaying their expression levels, for affinity purification, within diagnostic assays for determining circulating levels of soluble receptor polypeptides, for detecting or quantitating soluble zcytor11 receptor or soluble zcytor11 heterodimeric polypeptide and as neutralizing antibodies or as antagonists to block zcytor11 receptor or zcytor11 heterodimeric polypeptide such as zcytor11/CRF2-4 or ***IL*** - ***TIF*** activity in vitro and in vivo.

Dwg.0/0

L5 ANSWER 3 OF 4 MEDLINE
ACCESSION NUMBER: 2002696027 IN-PROCESS
DOCUMENT NUMBER: 22344641 PubMed ID: 12351624
TITLE: Interleukins 19, 20, and 24 Signal through Two Distinct Receptor Complexes. DIFFERENCES IN RECEPTOR-LIGAND INTERACTIONS MEDIATE UNIQUE BIOLOGICAL FUNCTIONS.
AUTHOR: Parrish-Novak Julia; Xu Wenfeng; Brender Ty; Yao Lena; Jones Crystal; West Jim; Brandt Cameron; Jelinek Laura; Madden Karen; McKernan Patricia A; Foster Donald C; Jaspers Stephen; Chandrasekher Yasmin A
CORPORATE SOURCE: Departments of Cytokine and Receptor Biology, In Vitro Biology, and Genetics, ZymoGenetics, Inc., Seattle, Washington 98102.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Dec 6) 277 (49) 47517-23.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021217
Last Updated on STN: 20021217
AB Cytokines that signal through Class II receptors form a distinct family that includes the interferons and interleukin 10 (IL-10). Recent identification of several IL-10 homologs has defined a cytokine subfamily that includes AK155, IL-19, IL-20, IL-22, and IL-24. Within this subfamily, IL-19, IL-20, and IL-24 exhibit substantial sharing of receptor complexes; all three are capable of signaling through IL-20RA/ ***IL*** - ***20RB*** , and IL-20 and IL-24 both can also use ***IL*** - ***22R*** / ***IL*** - ***20RB*** . However, the biological effects of these three cytokines appear quite distinct: immune activity with IL-19, skin biology with IL-20, and tumor apoptosis with IL-24. To more fully elucidate their interactions with the receptor complexes, we have performed a series of in vitro assays. Reporter, proliferation, and direct STAT activation assays using cell lines expressing transfected receptors revealed differences between the receptor complexes. IL-19 and IL-24 also exhibited growth inhibition on a cell line endogenously expressing all three receptor subunits, an effect that was seen at cytokine levels two orders of magnitude above those required for STAT activation or proliferation. These results demonstrate that, although this subclass exhibits receptor complex redundancy, there are differences in ligand/receptor interactions and in signal transduction that may lead to specificity and a distinct biology for each cytokine.

L5 ANSWER 4 OF 4 MEDLINE
ACCESSION NUMBER: 2001527384 MEDLINE
DOCUMENT NUMBER: 21448676 PubMed ID: 11564763
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L; Leemans C; Lejeune D; Kotenko S V; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Avenue Hippocrate 74, B-1200 Brussels, Belgium.
CONTRACT NUMBER: RO1 AI51139 (NIAID)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Oct 1) 167 (7) 3545-9.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204
AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20Ralpha and ***DIRS1*** /IL-20Rbeta (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by ***IL*** - ***22R*** and ***DIRS1*** /IL20Rbeta (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

=> d his

(FILE 'HOME' ENTERED AT 15:44:45 ON 27 DEC 2002)

FILE 'MEDLINE, JAPIO, BIOSIS, SCISEARCH, WPIDS, CAPLUS, EMBASE' ENTERED AT 15:44:55 ON 27 DEC 2002
L1 29 IL-20RB OR DIRS1
L2 17 DUP REM L1 (12 DUPLICATES REMOVED)
L3 16 L2 AND (IL-22? OR INTERLEUKIN-22)
L4 4 L2 AND (IL-22 RECEPTOR? OR IL-22R? OR IL-9 INDUCIBLE GENE OR IL
L5 4 DUP REM L4 (0 DUPLICATES REMOVED)

=> d l2 ibib bas 1-17
'BAS' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):end

=> d l2 ibib abs 1-17

L2 ANSWER 1 OF 17 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 1
ACCESSION NUMBER: 2002-723314 [78] WPIDS
DOC. NO. CPI: C2002-204803
TITLE: Soluble heterodimeric cytokine receptor useful for down-regulating interleukin-20 and treating inflammatory diseases, such as psoriasis and asthma, comprises an interleukin-22R subunit and a interleukin-20RB subunit.
DERWENT CLASS: B04 D16
INVENTOR(S): CHANDRASEKHER, Y A; FOSTER, D C; JASPERS, S R; NOVAK, J E; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC

COUNTRY COUNT: 99
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002072607 A2		20020919	(200278)*	EN	82

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002072607 A2		WO 2002-US7214	20020307

PRIORITY APPLN. INFO: US 2001-299865P 20010621; US 2001-274560P 20010309
AN 2002-723314 [78] WPIDS
AB WO 200272607 A UPAB: 20021204
NOVELTY - An isolated soluble heterodimeric cytokine receptor (I) comprising an interleukin-22R (IL-22R) subunit which comprises a polypeptide having a sequence of 228, 211, 273, 556, 558 or 541 amino acids, and a ***IL*** - ***20RB*** subunit comprising a polypeptide having a sequence of 311, 203, 201, 201, 196, 203, 196, 201, 352, 323, 336 or 307 amino acids, where the sequences are given in the specification, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) producing (I); and
(2) host cells (II) transformed or transfected with a DNA construct that encodes the extracellular domain of IL-22R and a DNA construct that encodes the extracellular domain of ***IL*** - ***20RB*** .
ACTIVITY - Antiinflammatory; Antipsoriatic; Antiallergic; Dermatological; Antibacterial; Immunosuppressive; Antiasthmatic; Antiulcer.
MECHANISM OF ACTION - IL-20 inhibitor. No biological data is given.
USE - (I) is useful for down-regulating IL-20 and thus treating inflammatory diseases, such as psoriasis, adult respiratory disease, septic shock, multiple organ failure, inflammatory lung injury such as asthma or bronchitis, bacterial pneumonia, eczema, atopic and contact dermatitis, ulcerative colitis and Crohn's disease.
Dwg.0/8

L2 ANSWER 2 OF 17 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 2
ACCESSION NUMBER: 2002-217182 [27] WPIDS
DOC. NO. CPI: C2002-066484
TITLE: New soluble cytokine receptor which binds interleukin-T-cell inducible factor and antagonizes its activity in inflammatory and immune diseases such as cancer, diabetes, asthma, sepsis, psoriasis and autoimmune diseases.
DERWENT CLASS: B04 D16
INVENTOR(S): KINDSVOGEL, W R; TOPOUZIS, S
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002012345 A2		20020214	(200227)*	EN	117

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001090524 A 20020218 (200244)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002012345 A2		WO 2001-US24838	20010808
AU 2001090524 A		AU 2001-90524	20010808

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001090524 A	Based on	WO 200212345

PRIORITY APPLN. INFO: US 2000-250876P 20001201; US 2000-223827P 20000808
AN 2002-217182 [27] WPIDS
AB WO 200212345 A UPAB: 20020429
NOVELTY - An isolated soluble cytokine receptor polypeptide (I), designated zcytor11 comprising a sequence (S1) of 211 amino acids defined in the specification or a sequence 90% identical to (S1) and which binds interleukin-T-cell inducible factor (IL-TIF) or antagonizes IL-TIF activity, where (I) forms homodimeric, heterodimeric or multimeric receptor complex, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) an isolated polynucleotide (II) that encodes (I), where the polypeptide encoded by the polynucleotide sequence binds or antagonizes IL-TIF having a sequence of 179 amino acids defined in the specification;
(2) an expression vector (III) comprising operably linked a transcription promoter, a first DNA segments encoding (I) and a transcription terminator; and a second transcription promoter, a second DNA segment encoding a soluble class I or class II cytokine receptor polypeptide, and a transcription terminator, where the first and second DNA segments are contained within a single expression vector or are contained within independent expression vectors;
(3) a culture cell (IV) comprising (III), and which expresses the polypeptides encoded by the DNA segments;
(4) a DNA construct (V) encoding a fusion protein comprising a first DNA segment encoding (I), and at least one other DNA segment encoding a soluble class I or class II cytokine receptor polypeptide, where the first and second other DNA segments are connected-in-frame and encode the fusion protein;
(5) an expression vector comprising a transcription promoter, (V) and a transcription terminator, where the promoter is operably linked to the DNA construct which is linked to the transcription terminator;
(6) a cultured cell (VI) comprising the above vector;
(7) an isolated heterodimeric or multimeric soluble receptor complex, comprising soluble receptor subunits comprising (I);
(8) producing (I); and
(9) an antibody produced by using (I) which specifically binds to a homodimeric, heterodimeric or multimeric receptor complex comprising a soluble cytokine receptor polypeptide.
ACTIVITY - Antidiabetic; Antiinflammatory; Cytostatic; Antithyroid; Immunosuppressive; Antibacterial; Antiasthmatic; Antipsoriatic; Neuroprotective; Dermatological; Antirheumatic; Antiarthritic; Antiallergic. No supporting data is given.
MECHANISM OF ACTION - Antagonist of IL-TIF.
USE - (I) is useful for reducing IL-TIF- or IL-9 induced inflammation, and inhibiting IL-TIF-induced proliferation of hematopoietic cells and their progenitors, especially lymphoid cells such as macrophages or T cells, by culturing bone marrow or peripheral blood cells with a composition comprising (I) to reduce proliferation of the hematopoietic cells in the bone marrow or peripheral blood cells as compared to bone marrow or peripheral blood cells cultured in the absence of soluble cytokine receptor. (I) is also useful for suppressing an immune response in a mammal exposed to an antigen or pathogen, by determining a level of an antigen- or pathogen-specific antibody, administering a composition comprising (I), determining a post administration level of antigen- or pathogen-specific antibody, and comparing the level of antibody before administration to the level of antibody after administration, where a lack of increase or a decrease in antibody level is indicative of suppressing an immune response. (I) is further useful for producing an antibody to soluble cytokine receptor polypeptide. (VI) is useful for producing a fusion protein (claimed). Soluble zcytor11 receptor or heterodimeric polypeptide is useful for enhancing the in vivo killing of target tissues by directly stimulating a zcytor11 receptor-modulated apoptotic pathway, resulting in cell death of hyperproliferative cells expressing zcytor11 receptor or a zcytor11 heterodimeric receptor, such as soluble zcytor11/CRF2-4 receptor. IL-TIF is involved in promoting Th1-type immune responses and antagonist of IL-TIF have beneficial use against diseases involving such immune responses. (I) is useful as cytokine antagonist and for detecting ligands that stimulate the proliferation and/or development of hematopoietic, lymphoid and myeloid cells in vitro and in vivo. Soluble zcytor11 heterodimers are useful as antagonists in inflammatory and immune diseases or conditions such as pancreatitis, type I diabetes (IDDM), pancreatic cancer, Graves disease, inflammatory bowel disease (IBD), Crohn's disease, colon and intestinal cancer, diverticulosis, autoimmune disease, sepsis, asthma, end-stage renal disease, psoriasis, organ or bone marrow transplant and kidney dysfunction. Soluble zcytor11 receptor or heterodimeric receptor polypeptides are useful in vivo or in diagnostic applications to detect IL-TIF expressing cancers in vivo or in tissue samples and to prepare antibodies. Antibodies recognizing zcytoR11, soluble zcytoR11/CRF2-4 heterodimers, and multimers are useful to antagonize or agonize signaling by the IL-TIF receptors in the treatment of autoimmune disease such as IDDM, multiple sclerosis (MS), systemic lupus erythematosus (SLE), myasthenia gravis, rheumatoid arthritis and IBD. Anti-soluble zcytor11, anti-soluble zcytoR11/CRF2-4 heterodimer or multimer monoclonal antibody (MAb) is useful as an antagonist to deplete unwanted immune cells to treat autoimmune disease such asthma, allergy and other atopic disease. ZcytoR11 serves as a target for MAb therapy of cancer where an antagonizing MAb inhibits cancer growth and targets immune-mediated killing. Antibodies to soluble zcytor11 receptor or heterodimeric polypeptide are useful for tagging cells that express the

corresponding receptors and assaying their expression levels, for affinity purification, within diagnostic assays for determining circulating levels of soluble receptor polypeptides, for detecting or quantitating soluble zcytor11 receptor or soluble zcytor11 heterodimeric polypeptide and as neutralizing antibodies or as antagonists to block zcytor11 receptor or zcytor11 heterodimeric polypeptide such as zcytor11/CRF2-4 or IL-TIF activity in vitro and in vivo.
Dwg.0/0

L2 ANSWER 3 OF 17 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-425815 [45] WPIDS
DOC. NO. CPI: C2002-120579
TITLE: Method of down-regulating IL-19 useful for treating inflammation comprises administration of a polypeptide comprised of the extracellular domain of IL-20RA and ***IL*** - ***20RB*** .
DERWENT CLASS: B04
INVENTOR(S): CHANDRASEKHER, Y A; JASPERS, S R
PATENT ASSIGNEE(S): (CHAN-I) CHANDRASEKHER Y A; (JASP-I) JASPERS S R; (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 97
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002022153	A2	20020321	(200245)*	EN	41

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

US 2002085992	A1	20020704	(200247)		
AU 2001090837	A	20020326	(200251)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002022153	A2	WO 2001-US28557	20010913
US 2002085992	A1 Provisional	US 2000-233305P	20000915
		US 2001-951268	20010913
AU 2001090837	A	AU 2001-90837	20010913

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001090837	A Based on	WO 200222153

PRIORITY APPLN. INFO: US 2000-233305P 20000915; US 2001-951268 20010913
AN 2002-425815 [45] WPIDS
AB WO 200222153 A UPAB: 20020717
NOVELTY - Method of down-regulating IL-19 comprises administration of a polypeptide comprised of the extracellular domain of IL-20RA and the extracellular domain of ***IL*** - ***20RB*** .
ACTIVITY - Antiinflammatory; Cytostatic; Antiarthritic; Antibacterial; Dermatological; Ophthalmological; Antiarteriosclerotic; Vasotropic; Antirheumatic; Antidiabetic.
MECHANISM OF ACTION - IL-19 antagonist; mda7 antagonist.
USE - For down-regulating IL-19, useful for the treatment of inflammation e.g. in diabetes, artherosclerosis, cataracts, reperfusion injury, cancer, infectious meningitis, rheumatic fever, systemic lupus erythematosus and rheumatoid arthritis.
A neutralization assay of IL-19 was performed to determine if the soluble IL-20RA/ ***IL*** - ***20RB*** heterodimeric receptor could neutralize IL-19.
Baby hamster kidney cells expressing the IL-20RA/ ***IL*** - ***20RB*** receptor were plated at 1000 cells/well in a 96 well plate. On day 2 the cells were replated into a serum free medium to down regulate their response, and on day 3 three different solutions containing IL-19 were made (0.1 ng/ml, 1 ng/ml and 10 ng/ml). As a control, 100 micro l aliquots of each solution were placed in different wells to determine the level of proliferation of the cells caused by IL-19. The soluble IL-20A/IL-20B receptor of concentration 10 micro g/ml were mixed with 100 micro l of each IL-19 solution, vortexed and the solutions were left at room temperature for 30 minutes. The solutions were loaded in triplicate in the wells and the plates were incubated at 37 deg. C for 4 hours, then read on a luminometer. The results showed that the soluble receptor neutralized some of the IL-19's activity at all three concentrations (especially the higher one) when compared to IL-19's activity alone.
Dwg.0/0

L2 ANSWER 4 OF 17 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2002-507215 [54] WPIDS
CROSS REFERENCE: 2001-418045 [44]
DOC. NO. CPI: C2002-144150
TITLE: Treating inflammatory skin and lung diseases using antibodies against interleukins (IL)-20 (which indirectly modulates activation of IL-8), useful for treating e.g. psoriasis, asthma and bronchitis.
DERWENT CLASS: B04 D16
INVENTOR(S): BLUMBERG, H; CHANDRASEKHER, Y A; EAGAN, M A; FOSTER, D C; JASPERS, S R; KELLY, J D; MADDEN, K L; NOVAK, J E; SPRECHER, C A; THOMPSON, P; XU, W
PATENT ASSIGNEE(S): (BLUM-I) BLUMBERG H; (CHAN-I) CHANDRASEKHER Y A; (EAGA-I) EAGAN M A; (FOST-I) FOSTER D C; (JASP-I) JASPERS S R; (KELL-I) KELLY J D; (MADD-I) MADDEN K L; (NOVA-I) NOVAK J E; (SPRE-I) SPRECHER C A; (THOM-I) THOMPSON P; (XUWW-I) XU W
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002042366	A1	20020411	(200254)*		1

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2002042366	A1 Provisional	US 1999-171969P	19991223
	Provisional	US 2000-213341P	20000622
		US 2000-746359	20001222

PRIORITY APPLN. INFO: US 2000-746359 20001222; US 1999-171969P 19991223; US 2000-213341P 20000622.
AN 2002-507215 [54] WPIDS
CR 2001-418045 [44]
AB US2002042366 A UPAB: 20020823
NOVELTY - A method (I) for treating a mammal afflicted with a disease in which an interleukin-20 (IL-20) polypeptide plays a role (the IL-20 polypeptide comprises 9 defined amino acid sequences (A1-A9) given in the specification), comprising administering antagonist of the IL-20 polypeptide to the individual, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) promoting (M1) the expression of IL-8 in a cell comprising bringing the cell into contact with IL-20; and
(2) increasing (M2) the expression of IL-8 in an individual comprising administering IL-20 to the individual.
ACTIVITY - Dermatological; antipsoriatic; antiinflammatory; respiratory; antiasthmatic.
No biological data given.
MECHANISM OF ACTION - Antibody inhibition; modulation of IL-20 expression and activity.
An important cytokine in the inflammatory process is interleukin-8 (IL-8). IL-8 is a chemokine that acts as an agonist for neutrophils via chemotaxis and the release of granule enzymes. IL-8 binds to two receptors on neutrophils. IL-8 receptors are also found on monocytes, basophils, and eosinophils. In human fibroblasts, cytomegalovirus has been shown to induce the expression of IL-8 receptors and to replicate more rapidly when cells are exposed to IL-8. IL-8 is a potent chemoattractant for neutrophils; and the early stages of periodontal disease are characterized by the influx of neutrophils. IL-8 is a potent inducer of angiogenesis in several angiogenesis-dependent chronic inflammatory conditions, including rheumatoid arthritis, psoriasis, and idiopathic pulmonary fibrosis. Additionally, IL-8 is an important source of angiogenic activity in human lung cancer. Also, IL-8 expression correlates with experimental metastatic activity of some melanoma cell lines. Therefore an effective method to treat inflammatory diseases would be to administer an agent that would inhibit IL-8. It has been shown that IL-20 up-regulates IL-8. Therefore antagonists to IL-20 can be used to treat these diseases.
USE - The method is used for treating diseases in which the IL-20 polypeptide plays a role e.g. a skin disease (psoriasis, eczema, atopic dermatitis and contact dermatitis) or an inflammatory lung disease (adult respiratory disease, asthma, bronchitis and pneumonia) (claimed).
Dwg.0/0

L2 ANSWER 5 OF 17 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2002696027 IN-PROCESS
DOCUMENT NUMBER: 22344641 PubMed ID: 12351624
TITLE: Interleukins 19, 20, and 24 Signal through Two Distinct Receptor Complexes. DIFFERENCES IN RECEPTOR-LIGAND INTERACTIONS MEDIATE UNIQUE BIOLOGICAL FUNCTIONS.
AUTHOR: Parrish-Novak Julia; Xu Wenfeng; Brender Ty; Yao Lena; Jones Crystal; West Jim; Brandt Cameron; Jelinek Laura; Madden Karen; McKernan Patricia A; Foster Donald C; Jaspers Stephen; Chandrasekher Yasmin A
CORPORATE SOURCE: Departments of Cytokine and Receptor Biology, In Vitro Biology, and Genetics, ZymoGenetics, Inc., Seattle, Washington 98102.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Dec 6) 277 (49)

47517-23.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20021217
Last Updated on STN: 20021217

AB Cytokines that signal through Class II receptors form a distinct family that includes the interferons and interleukin 10 (IL-10). Recent identification of several IL-10 homologs has defined a cytokine subfamily that includes AK155, IL-19, IL-20, IL-22, and IL-24. Within this subfamily, IL-19, IL-20, and IL-24 exhibit substantial sharing of receptor complexes; all three are capable of signaling through IL-20RA/ ***IL*** - ***20RB*** , and IL-20 and IL-24 both can also use IL-22R/ ***IL*** - ***20RB*** . However, the biological effects of these three cytokines appear quite distinct: immune activity with IL-19, skin biology with IL-20, and tumor apoptosis with IL-24. To more fully elucidate their interactions with the receptor complexes, we have performed a series of in vitro assays. Reporter, proliferation, and direct STAT activation assays using cell lines expressing transfected receptors revealed differences between the receptor complexes. IL-19 and IL-24 also exhibited growth inhibition on a cell line endogenously expressing all three receptor subunits, an effect that was seen at cytokine levels two orders of magnitude above those required for STAT activation or proliferation. These results demonstrate that, although this subclass exhibits receptor complex redundancy, there are differences in ligand/receptor interactions and in signal transduction that may lead to specificity and a distinct biology for each cytokine.

L2 ANSWER 6 OF 17 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 4
ACCESSION NUMBER: 2001-398320 [42] WPIDS
DOC. NO. CPI: C2001-121173
TITLE: Isolated interleukin 20 soluble receptor comprising two polypeptide subunits IL-20RA and ***IL*** - ***20RB*** , useful for down-regulating IL-20 and thus treating inflammatory diseases such as psoriasis.
DERWENT CLASS: B04
INVENTOR(S): BRANDT, C S; FOSTER, D C; FOX, B A; KELLY, J D; MADDEN, K L; PRESNELL, S R; RIXON, M W; SPRECHER, C A; XU, W
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001046232	A2	20010628	(200142)*	EN	119

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001022925 A 20010703 (200164)
EP 1246846 A2 20021009 (200267) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001046232	A2	WO 2000-US35307	20001222
AU 2001022925	A	AU 2001-22925	20001222
EP 1246846	A2	EP 2000-986743	20001222
		WO 2000-US35307	20001222

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001022925	A Based on	WO 200146232
EP 1246846	A2 Based on	WO 200146232

PRIORITY APPLN. INFO: US 2000-213416P 20000622; US 1999-471774 19991223
AN 2001-398320 [42] WPIDS
AB WO 200146232 A UPAB: 20010726
NOVELTY - An isolated interleukin 20 (IL-20) soluble receptor comprising two polypeptide subunits IL-20RA (formerly known as ZcytoR7) and ***IL*** - ***20RB*** (formerly known as ***DIRS1***), is new.
DETAILED DESCRIPTION - An isolated interleukin 20 (IL-20) soluble receptor comprising two polypeptide subunits IL-20RA (formerly known as ZcytoR7) and ***IL*** - ***20RB*** (formerly known as ***DIRS1***), is new.
The IL-20RA subunit comprises the 221, 217, 217, 214 or 207 amino acid sequence defined in the specification. The ***IL*** - ***20RB*** subunit comprises the 203, 201, 201, 196, 203 or 196 amino acid sequence defined in the specification.
INDEPENDENT CLAIMS are also included for the following:
(1) a soluble IL-20 receptor comprised of a first polypeptide disulfide bonded to second polypeptide, where the first polypeptide comprises the 571 (extracellular domain of IL-RA fused to a mutated human Ig gamma 1 constant region) or 547 (mature sequence of the extracellular domain of IL-RA fused to a mutated human Ig gamma 1 constant region minus the signal sequence) amino acid sequence defined in the specification, and the second polypeptide comprises the 336 (extracellular domain of IL-RB fused to a wild-type human Ig kappa light chain constant region) or 307 (mature sequence of the extracellular domain of IL-RB fused to a wild-type human Ig kappa light chain constant region minus the signal sequence) amino acid sequence defined in the specification;
(2) a soluble receptor comprised of a first polypeptide disulfide bonded to second polypeptide, where the first polypeptide comprises the 594 or 559 amino acid sequence (representing the constant regions of an Ig heavy chain) defined in the specification, and the second polypeptide comprises the 352 or 323 amino acid sequence (representing the constant regions of an Ig light chain) defined in the specification; and
(3) a protein having a first polypeptide and a second polypeptide where the first polypeptide comprises the 150 amino acid sequence defined in the specification and the second polypeptide comprises the 135 or another 135 amino acid sequence defined in the specification.
ACTIVITY - Antiinflammatory; , antipsoriatic; antiasthmatic; antibacterial; dermatological; antiulcer.
No biological data given.
MECHANISM OF ACTION - IL-20 soluble receptor; antagonist.
No biological data given.
USE - The soluble receptor can be used to down-regulate IL-20 and thus treat inflammatory diseases such as psoriasis, inflammatory lung injury such as asthma or bronchitis, adult respiratory disease (ARD), septic shock, multiple organ failure, bacterial pneumonia, eczema, atopic and contact dermatitis, and inflammatory bowel disease such as ulcerative colitis and Crohn's disease.
Dwg.0/8

L2 ANSWER 7 OF 17 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-418045 [44] WPIDS
CROSS REFERENCE: 2002-507215 [54]
DOC. NO. CPI: C2001-126398
TITLE: Treating interleukin-20 induced inflammation in a mammal, such as adult respiratory disease, eczema, psoriasis, contact dermatitis, multiple organ failure and septic shock, involves administering IL-20 antagonist.
DERWENT CLASS: B04 D16
INVENTOR(S): BLUMBERG, H; CHANDRASEKHER, J A; EAGAN, M A; FOSTER, D C; JASPERS, S R; KELLY, J D; MADDEN, K L; NOVAK, J E; SPRECHER, C A; THOMPSON, P; WENFENG, X
PATENT ASSIGNEE(S): (ZYMO) ZYMOGENETICS INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001046261	A1	20010628	(200144)*	EN	117

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001024580 A 20010703 (200164)
EP 1244708 A1 20021002 (200265) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001046261	A1	WO 2000-US35305	20001222
AU 2001024580	A	AU 2001-24580	20001222
EP 1244708	A1	EP 2000-988365	20001222
		WO 2000-US35305	20001222

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001024580	A Based on	WO 200146261
EP 1244708	A1 Based on	WO 200146261

PRIORITY APPLN. INFO: US 2000-213341P 20000622; US 1999-470898 19991223
AN 2001-418045 [44] WPIDS
CR 2002-507215 [54]
AB WO 200146261 A UPAB: 20021010
NOVELTY - Treating a mammal afflicted with a disease in which an

interleukin-20 (IL-20) polypeptide plays a role, where IL-20 polypeptide comprises a sequence (S1) of 176, 152, 151, 127, 176, 152, 144, 154 or 130 amino acids fully defined in the specification, involves administering antagonist (I) of IL-20 polypeptide to the individual.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) promoting the expression of IL-8 in a cell, by bringing the cell into contact with IL-20; and

(2) increasing the expression of IL-8 in an individual, by administering IL-20 to the individual.

ACTIVITY - Antipsoriatic; dermatological; antiasthmatic; antiinflammatory; antibacterial; immunosuppressive; antiulcer; antirheumatic; antiarthritic.

MECHANISM OF ACTION - IL-20 antagonist (claimed). No supporting data given.

USE - (I) is useful for treating psoriasis, eczema, atopic dermatitis, contact dermatitis, adult respiratory disease, asthma, bronchitis and pneumonia (claimed). (I) is also useful for treating multiple organ failure, inflammatory lung injury, septic shock, bacterial pneumonia, inflammatory bowel disease, rheumatoid arthritis, ulcerative colitis and Crohn's disease.

Dwg.0/8

L2 ANSWER 8 OF 17 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2001527384 MEDLINE
DOCUMENT NUMBER: 21448676 PubMed ID: 11564763
TITLE: Cutting edge: STAT activation by IL-19, IL-20 and mda-7 through IL-20 receptor complexes of two types.
AUTHOR: Dumoutier L; Leemans C; Lejeune D; Kotenko S V; Renauld J C
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Brussels Branch, Avenue Hippocrate 74, B-1200 Brussels, Belgium.
CONTRACT NUMBER: RO1 AI51139 (NIAID)
SOURCE: JOURNAL OF IMMUNOLOGY, (2001 Oct 1) 167 (7) 3545-9.
Journal code: 2985117R. ISSN: 0022-1767.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011001
Last Updated on STN: 20020122
Entered Medline: 20011204

AB IL-10-related cytokines include IL-20 and IL-22, which induce, respectively, keratinocyte proliferation and acute phase production by hepatocytes, as well as IL-19, melanoma differentiation-associated gene 7, and AK155, three cytokines for which no activity nor receptor complex has been described thus far. Here, we show that mda-7 and IL-19 bind to the previously described IL-20R complex, composed by cytokine receptor family 2-8/IL-20Ralpha and ***DIRS1*** /IL-20Rbeta (type I IL-20R). In addition, mda-7 and IL-20, but not IL-19, bind to another receptor complex, composed by IL-22R and ***DIRS1*** /IL20Rbeta (type II IL-20R). In both cases, binding of the ligands results in STAT3 phosphorylation and activation of a minimal promoter including STAT-binding sites. Taken together, these results demonstrate that: 1) IL-20 induces STAT activation through IL-20R complexes of two types; 2) mda-7 and IL-20 redundantly signal through both complexes; and 3) IL-19 signals only through the type I IL-20R complex.

L2 ANSWER 9 OF 17 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 2001560962 MEDLINE
DOCUMENT NUMBER: 21519027 PubMed ID: 11606703
TITLE: The ***DIRS1*** group of retrotransposons.
AUTHOR: Goodwin T J; Poulter R T
CORPORATE SOURCE: Department of Biochemistry, University of Otago, Dunedin, New Zealand.. timg@sanger.otago.ac.nz
SOURCE: MOLECULAR BIOLOGY AND EVOLUTION, (2001 Nov) 18 (11) 2067-82.
Journal code: 8501455. ISSN: 0737-4038.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011022
Last Updated on STN: 20020128
Entered Medline: 20020123

AB Only three retrotransposons of the ***DIRS1*** group have previously been described: ***DIRS1*** from the slime mold Dictyostelium discoideum, PAT from the nematode Panagrellus redivivus, and Prt1 from the zygomycetous fungus Phycomyces blakesleeanus. Analyses of the reverse transcriptase sequences encoded by these elements suggest that they are related to the long terminal repeat (LTR) retroelements, such as the Ty3/gypsy retrotransposons and the vertebrate retroviruses. The ***DIRS1*** -group elements, however, have several unusual structural features which distinguish them from typical LTR elements: (1) they lack the capacity to encode DDE-type integrases or aspartic proteases; (2) they have open reading frames (ORFs) of unknown function; (3) they integrate without creating duplications of their target sites; and (4) although they are bordered by terminal repeats, these sequences differ from typical LTRs in that they are either inverted repeats or "split" direct repeats. Because of the small number of ***DIRS1*** -like elements described, and the unusual structures of these elements, little is known about their evolution, distribution, and replication mechanisms. Here, we report the identification of several new ***DIRS1*** -like retrotransposons, including elements from nematodes, sea urchins, fish, and amphibia. We also present evidence for the existence of ***DIRS1*** -like sequences in the human genome. In addition, we show that the lack of DDE-type integrase genes from elements of the ***DIRS1*** group is explained by the finding that the previously uncharacterized ORFs of these elements encode proteins related to the site-specific recombinase of bacteriophage lambda. The presence of lambda-recombinase-like genes in ***DIRS1*** elements also accounts for the lack of target-site duplications for these elements and may be related to the unusual structures of their terminal repeats.

L2 ANSWER 10 OF 17 WPIDS (C) 2002 THOMSON DERWENT DUPLICATE 7
ACCESSION NUMBER: 1999-551408 [46] WPIDS
DOC. NO. NON-CPI: N1999-407983
DOC. NO. CPI: C1999-161015
TITLE: New receptor subunits potentially useful, e.g. for treating degenerative and abnormal conditions that involve cellular development,.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): BAZAN, J F; MOORE, K W; MURGOLO, N J; PARHAM, C L
PATENT ASSIGNEE(S): (SCHE) SCHERING CORP
COUNTRY COUNT: 82
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9946379	A2	19990916	(199946)*	EN	41

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GD GE HR HU ID IL IN IS JP KG KR KZ LC LK LR LT LU LV MD MG MK MN MX NO NZ PL PT RO RU SE SG SI SK SL TJ TM TR TT UA UZ VN YU

AU 9928718 A 19990927 (200006)
EP 1062332 A2 20001227 (200102) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV NL PT RO SE
MX 2000008848 A1 20010301 (200170)
JP 2002505879 W 20020226 (200219) 93

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9946379	A2	WO 1999-US3735	19990308
AU 9928718	A	AU 1999-28718	19990308
EP 1062332	A2	EP 1999-909534	19990308
		WO 1999-US3735	19990308
MX 2000008848	A1	MX 2000-8848	20000908
JP 2002505879	W	WO 1999-US3735	19990308
		JP 2000-535746	19990308

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9928718	A Based on	WO 9946379
EP 1062332	A2 Based on	WO 9946379
JP 2002505879	W Based on	WO 9946379

PRIORITY APPLN. INFO: US 1998-37394 19980309
AN 1999-551408 [46] WPIDS
AB WO 9946379 A UPAB: 19991110

NOVELTY - Two subunits of receptors related to cytokine receptors, designated DNAX Interferon-like Receptor Subunits 1 and 2 (***DIRS1*** and DIRS2), are new.

DETAILED DESCRIPTION - New composition is selected from:

(1) substantially pure or recombinant ***DIRS1*** polypeptide comprising at least 3 distinct non-overlapping segments of at least 4 amino acids identical to segments of the 311 amino acid sequence (I) fully defined in the specification;

(2) a substantially pure or recombinant ***DIRS1*** polypeptide comprising at least 2 distinct non-overlapping segments of at least 5 amino acids identical to segments of (I);

(3) a natural sequence ***DIRS1*** comprising mature (I);

(4) a fusion polypeptide comprising ***DIRS1*** sequence;

(5) a substantially pure or recombinant DIRS2 polypeptide comprising at least 3 distinct non-overlapping segments of at least 10 amino acids identical to segments of the 231 amino acid sequence (II) fully defined in the specification;

(6) a substantially pure or recombinant DIRS2 polypeptide comprising at least 2 distinct non-overlapping segments of at least 11 amino acids identical to segments of (II);

(7) a natural sequence DIRS2 comprising mature (I), or

(8) a fusion polypeptide comprising DIRS2 sequence.

INDEPENDENT CLAIMS are also included for the following:

(1) a composition comprising a substantially pure ***DIRS1*** or DIRS2 and another Interferon Receptor family member;

(2) an isolated or recombinant nucleic acid encoding the ***DIRS1*** or DIRS2 polypeptide, where the ***DIRS1*** or DIRS2 is from a human, or nucleic acid that:

(a) encodes antigenic peptide sequence(s) of a fragment of (I) or (II) (for ***DIRS1*** and DIRS2 respectively);

(b) exhibits identity over at least 13 or 30 nucleotides to a natural cDNA encoding that segment (for ***DIRS1*** and DIRS2 respectively);

(c) is an expression vector;

(d) further comprises an origin of replication;

(e) is from a natural source;

(f) comprises a detectable label;

(g) comprises a synthetic sequence;

(h) is less than 6kb, preferably less than 3kb;

(i) is from a primate;

(j) comprises a natural full length coding sequence;

(k) is a hybridisation probe for a gene encoding ***DIRS1*** , or

(l) is a PCR primer, PCR product, or mutagenesis primer;

(3) a cell, particularly a bacterial, yeast, insect, or mammalian (especially a mouse, primate or human cell), or tissue comprising the recombinant nucleic acid;

(4) a nucleic acid that:

(a) hybridises under wash conditions of 30 mins at 30 deg. C and 2M salt to the 1381 or 1244 bp sequence fully defined in the specification, or

(b) exhibits identity over at least 30 nucleotides to a primate ***DIRS1*** or DIRS2;

(5) modulating physiology or development of a cell or tissue culture cells, comprising contacting the cell with an agonist or antagonist of mammalian DIRS1 or DIRS2, preferably by transforming the cell with a nucleic acid encoding DIRS1 or DIRS2 and another cytokine receptor subunit.

ACTIVITY - Signal transduction; ligand binding.

MECHANISM OF ACTION - None given.

USE - The isolated receptor gene provides means to generate an economical source of the receptor, allow expression of more receptors on a cell leading to increased assay sensitivity, promote characterisation of various receptor subtypes and variants, and allow correlation of activity with receptor structures. The invention should contribute to new therapies for degenerative and abnormal conditions that involve cellular development, differentiation or function.

ADVANTAGE - None given

Dwg.0/0

L2 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:547152 CAPLUS
DOCUMENT NUMBER: 105:147152
TITLE: Structure and regulated transcription of DIRS-1, a novel Dictyostelium discoideum transposable element
AUTHOR(S): Cappello, Joe; Cohen, Stephen M.; Handelsman, Karl; Lodish, Harvey F.
CORPORATE SOURCE: Nine Cambridge Cent., Whitehead Inst. Biomed. Res., Cambridge, MA, 02142, USA
SOURCE: Genet., Dev., Evol., Stadler Genet. Sympsoium, 17th (1986), Meeting Date 1985, 235-51. Editor(s): Gustafson, J. Perry; Stebbins, G. Ledyard; Ayala, Francisco J. Plenum: New York, N. Y. CODEN: 55EYAM
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 26 refs. on the DIRS-1 transposable element of D. discoideum, its structure, its transcription and its expression in yeast cell.

L2 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:492275 CAPLUS
DOCUMENT NUMBER: 105:92275
TITLE: Structure and regulated transcription of DIRS-1: an apparent retrotransposon of Dictyostelium discoideum
AUTHOR(S): Cappello, J.; Handelsman, K.; Cohen, S. M.; Lodish, H. F.
CORPORATE SOURCE: Whitehead Inst. Biomed. Res., Cambridge, MA, 02142, USA
SOURCE: Cold Spring Harbor Symposia on Quantitative Biology (1985), 50(Mol. Biol. Dev.), 759-67 CODEN: CSHSAZ; ISSN: 0091-7451
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Heat shock induces transcription of the DIRS-1 element in D. discoideum. An essential component of the DIRS-1 promoter, identified by deletion mapping was the 18-base-pair palindrome sequence located 120 base pairs upstream of the initiation site of transcription. Each half of this palindrome contained an apparent functional heat-shock promoter. Deletion of the entire palindrome abolished heat-shock-inducible promoter activity. Although both inverted long terminal repeats of DIRS-1 contain functional heat-shock promoters, transcription of the DIRS-1 element occurred almost exclusively from the left promoter. One of the open reading frames, ORF3, in DIRS-1 encoded a protein the sequence of which was homologous to that of reverse transcriptase [9068-38-6]. The role of the ORF3-encoded protein in replication of DIRS-1 is discussed.

L2 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:63187 CAPLUS
DOCUMENT NUMBER: 104:63187
TITLE: Sequence of Dictyostelium DIRS-1: an apparent retrotransposon with inverted terminal repeats and an internal circle junction sequence
AUTHOR(S): Cappello, Joe; Handelsman, Karl; Lodish, Harvey F.
CORPORATE SOURCE: Whitehead Inst. Biomed. Res., Nine Cambridge Cent., Cambridge, MA, 02142, USA
SOURCE: Cell (Cambridge, MA, United States) (1985), 43(1), 105-15 CODEN: CELLB5; ISSN: 0092-8674
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The D. discoideum transposon DIRS-1 contains long terminal repeats that are inverted (ITRs) and nonidentical. The internal sequence contains 4158 nucleotides and encodes 3 open reading frames (ORFs). Two of the ORFs (ORFs 2 and 3) are colinear and overlap for >2000 bases. Unusual sequence conservation between the 2 DIRS-1 elements in the overlap region is discussed. The conserved reading frame (ORF3) contains a 200-amino acid region that bears significant homol. to retrovirus reverse transcriptase. Based on this homol., DIRS-1 is classified as a possible retrotransposon and a model is proposed by which the nearly genomic length 4.5 kilobase DIRS-1 RNA could be used to generate a genomic DNA copy of DIRS-1 with nonidentical ITRs.

L2 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:433958 CAPLUS
DOCUMENT NUMBER: 101:33958
TITLE: Dictyostelium transposable element DIRS-1 has 350-base-pair inverted terminal repeats that contain a heat shock promoter
AUTHOR(S): Zuker, Charles; Cappello, Joe; Lodish, Harvey F.; George, Pierre; Chung, Steve
CORPORATE SOURCE: Dep. Biol., Massachusetts Inst. Technol., Cambridge, MA, 02139, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1984), 81(9), 2660-4 CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB DIRS-1 is a 4.7-kilobase-pair repetitive and apparently transposable Dictyostelium genetic element that is transcribed during differentiation or after heat shock. The terminal regions of DIRS-1 are inverted repeats of 330 base pairs (bp). The repeats are highly conserved both within a given element as well as between different members of the family (<10% divergence). At the distal end of all left repeats is a 32-nucleotide sequence composed almost entirely of A and T residues. In addn. to this 32-base A + T sequence, the distal region of all right repeats is extended by a 28-bp A + T-rich sequence that is identical in all copies. The sequences flanking each DIRS-1 sequence are completely dissimilar, and there appears to be no duplication of the genomic DNA sequence at the presumed point of DIRS-1 insertion. The terminal repeats can also be found interspersed in the genome independently of the complete element. In addn., the terminal repeats carry a 15-nucleotide sequence that greatly resembles the Drosophila consensus heat-shock promoter and may be involved in the transcriptional induction of the DIRS-1 sequences.

L2 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:18727 CAPLUS
DOCUMENT NUMBER: 102:18727
TITLE: Transcription of Dictyostelium discoideum transposable element DIRS-1
AUTHOR(S): Cohen, Stephen M.; Cappello, Joe; Lodish, Harvey F.
CORPORATE SOURCE: Dep. Biol., Massachusetts Inst. Technol., MA, USA
SOURCE: Molecular and Cellular Biology (1984), 4(11), 2332-40 CODEN: MCEBD4; ISSN: 0270-7306
DOCUMENT TYPE: Journal
LANGUAGE: English
AB DIRS-1 is a D. discoideum transposable element that contains heat-shock promoter sequences in the inverted terminal repeats. Transcription of a 4.5-kilobase polyadenylated RNA initiates at a discrete site within the left-terminal repeat of DIRS-1, downstream from heat-shock promoter and TATA box sequences. This RNA represents a full-length transcript of DIRS-1. Described are: a cDNA clone that contains the 4.1 kilobases of internal sequence of DIRS-1, a cDNA clone that spans the junction between the internal sequences and the right-terminal repeat, and a cDNA clone that appears to have been transcribed from a rearranged genomic copy of DIRS-1. A 2nd DIRS-1 RNA, named E1, is transcribed on the opposite strand of DIRS-1 from the 4.5-kilobase RNA and is under control of the heat-shock promoter in the right-terminal repeat. E1 transcription initiates at multiple positions both within and downstream from the right-terminal

repeat. The same transcriptional initiation sites are used during normal development and during heat shock, suggesting that in all cases DIRS-1 transcription is regulated by the heat-shock promoters contained within the 2 terminal repeats.

L2 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:623601 CAPLUS
DOCUMENT NUMBER: 101:223601
TITLE: Dictyostelium transposable element DIRS-1 preferentially inserts into DIRS-1 sequences
AUTHOR(S): Cappello, Joe; Cohen, Stephen M.; Lodish, Harvey F.
CORPORATE SOURCE: Dep. Biol., Massachusetts Inst. Technol., Cambridge, MA, 02139, USA
SOURCE: Molecular and Cellular Biology (1984), 4(10), 2207-13
CODEN: MCEBD4; ISSN: 0270-7306
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Sequence anal. of genomic clones contg. the intact Dictyostelium transposable element DIRS-1 reveals that in 5 of 6 cases DIRS-1 inserted into other DIRS-1 sequences. The nucleotide sequences just beyond the endpoints of the terminal repeats of 5 different genomic clones can be aligned with different regions of the internal nucleotide sequence of DIRS-1. In the 3 genomic clones which contain flanking sequences on both sides of the element, both flanking sequences are homologous with DIRS-1. In 1 of these clones, both extended flanking sequences represent the full 4.1-kilobase EcoRI fragment of DIRS-1, which has been interrupted by the insertion of an intact DIRS-1 element. There is no duplication or deletion (except possibly 1 base) of the DIRS-1 sequence upon insertion of a 2nd DIRS-1 transposon. DIRS-1-into-DIRS-1 insertions can occur in either a colinear or inverted orientation with respect to the target sequence; the target sequence need not be an intact DIRS-1 element. A cDNA clone was also described which could be derived by transcription of a sequence that resulted from a DIRS-1-into-DIRS-1 insertion; its significance is discussed concerning the function of the heat-shock promoters found in the terminal repeats of DIRS-1 and in other DIRS-1-related sequences.

L2 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:73381 CAPLUS
DOCUMENT NUMBER: 102:73381
TITLE: Transcription of DIRS-1: an unusual Dictyostelium transposable element
AUTHOR(S): Cohen, Stephen M.; Cappello, Joe; Zuker, Charles; Lodish, Harvey F.
CORPORATE SOURCE: Dep. Biol., Massachusetts Inst. Technol., Cambridge, MA, 02139, USA
SOURCE: UCLA Symposia on Molecular and Cellular Biology, New Series (1984), 19(Mol. Biol. Dev.), 491-508
CODEN: USMBD6; ISSN: 0735-9543
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A discussion is given on transcription of the Dictyostelium DIRS-1 element, a transposable element consisting of 4.1 kilobase pairs flanked by .apprx.330-base-pair inverted terminal repeats. DIRS-1 is transcribed into a heterogeneously sized population of RNAs, the function of which is not known. Transcription is induced during development and can be induced in vegetative cells by heat shock. Sequence anal. of the terminal repeats of DIRS-1 revealed the presence of heat-shock promoters that are probably responsible for directing the transcription of DIRS-1 RNAs.